Rooftop Packaged Air Conditioners

Models:
MRT 080A/AR
MRT 100A/AR
MRT 150A/AR
MRT 200A/AR
MRT 250A/AR
MRT 300A/AR
MRT 060A
MRT 120A
M4RT 080A/AR
M4RT 100A/AR
M4RT 150A/AR
M4RT 200A/AR
M4RT 060A
M4RT 120A

McQuay®
Air Conditioning

Contents

Note : Installation and maintenance are to be performed only by qualified personnel who are familiar with local codes and regulations, and experienced with this type of equipment.

Caution: Sharp edges and coil surfaces are a potential injury hazard. Avoid contact with them.

Warning : Moving machinery and electrical power hazard. May cause severe personal injury or death. Disconnect and lock off power before servicing equipment.

Safety Precautions

Before installing the air conditioner unit, please read the following safety precautions carefully.

Warning

- Installation and maintenance should be performed by qualified persons who are familiar with local code and regulation, and experienced with this type of appliance.
- All field wiring must be installed in accordance with the national wiring regulation.
- Ensure that the rated voltage of the unit corresponds to that of the name plate before commencing wiring work
- according to the wiring diagram.
- The unit must be GROUNDED to prevent possible hazard due to insulation failure.
- All electrical wiring must not touch the refrigerant piping, compressor and any moving parts of the fan motors.
- Confirm that the unit has been switched OFF before installing or servicing the unit.

IMPORTANT

DO NOT INSTALL OR USE THE AIR CONDITIONER UNIT IN AN LAUNDRY ROOM

Caution

Please take note of the following important points when installing

- **Do not install the unit where leakage of flammable gas may occur**

If gas leaks and accumulates around the unit, it may cause fire ignition.

- **Confirm drainage piping is connected properly**

If the drainage piping is not connected perfectly, it may cause water leakage which will dampen the furniture.

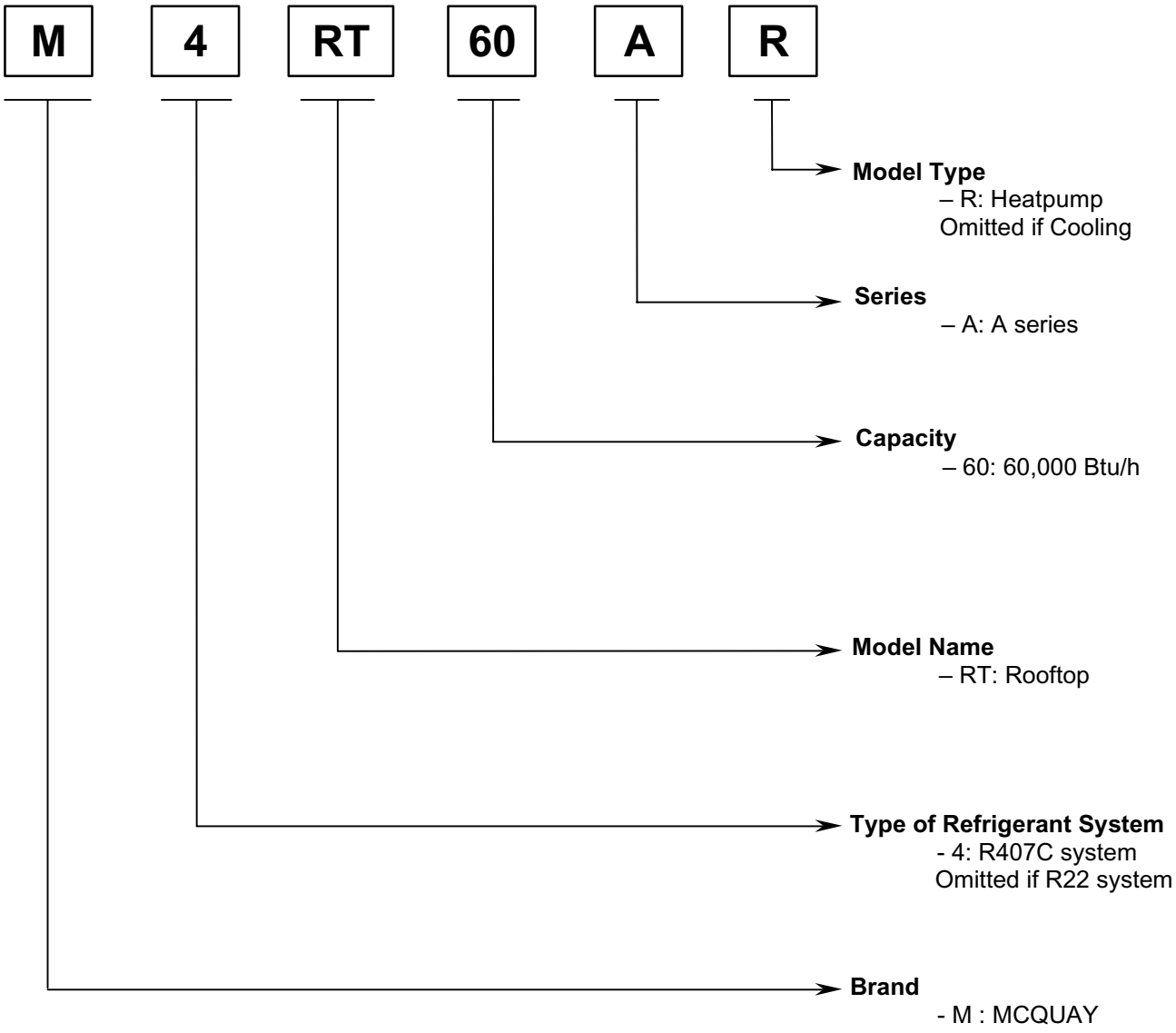
- **Do not overcharge the unit**

This unit is factory pre-charged. Over charge will cause over current or damage to the compressor.

- **Ensure that the unit panel is closed after service or installation.**

Unsecured panel will cause unit to operate noisily.

Nomenclature



Features

High Efficiency
The McQuay rooftop unit is design with high efficiency and reliability scroll compressor.

Package Unit
The design of one single unit configuration, all refrigerant work at site can be eliminated. This will ensure expedited installation time and minimise installation labour involve. The refrigerant is factory charged to ensure clean and efficient operation.

Flexibility Of Installation
The McQuay Rooftop Package is equipped with flexibility of horizontal side throw and vertical down throw. The changing of type of throw can be achieved by easily switching the fan and motor. This will allow for maximum flexibility in installation.

Flexibility Of Air Supply
McQuay Rooftop Package is using belt driven fan such that the air volume and static required can be adjusted according to the requirement. This flexibility allows for wider application.

Flat Top Design
McQuay Rooftop Package flat top design allow for maximum utilization of warehouse and container space.

Electrical Control Capability
All series are equipped with our Global Remote Controller (PAC-204RC). Please refer to Page 80 for details.
The Global Remote Controller gives the programmable weekly timer, compressor anti-short cycle timer (3 min), cool/fan/auto changeover, etc.
The factory standard is for provision of 24 volt terminal block to enable a field wired control of contractors' choice

Specifications

Cooling Model (50Hz – R22)

MODEL			MRT060A	MRT120A
TOTAL COOLING CAPACITY		kcal/h	14868	29232
		kW	17.3	34.0
		Btu/h	59000	116000
SENSIBLE COOLING CAPACITY		kcal/h	10259	21047
		kW	11.9	24.5
		Btu/h	40710	83520
RATED TOTAL POWER INPUT		W	5610	11560
RATED RUNNING CURRENT		A	10.5	22.1
POWER SOURCE		V/Ph/Hz	380~415 / 3 / 50	
CAPACITY STEPS		%	0-100	0-100
REFRIGERANT			R22 (FACTORY CHARGED)	
REFRIGERANT CHARGE		kg	5.2	6.2
REFRIGERANT CONTROL			TXV	
EVAPORATOR			CROSS FIN COIL	
FIN	MATERIAL		ALUMINIUM	
	THICKNESS	mm/in	0.11 / 0.004	0.12 / 0.005
ROW / FIN PER INCH			3 / 16	4 / 14
FACE AREA		m^2/ft^2	0.53 / 5.70	0.65 / 6.99
TUBE	MATERIAL		SEAMLESS INNER GROOVED COPPER	
	WALL THICKNESS	mm(in)	0.33 / 0.013	
	DIAMETER	mm(in)	9.52 / 0.375	
FAN			CENTRIFUGAL (GALVANISED STEEL) - BELT DRIVE	
FAN MOTOR			THREE PHASE SQUIRREL CAGE INDUCTION MOTOR	
NO OF FAN MOTOR / OUTPUT			1 / 0.75kW	1 / 1.5kW
AIR FLOW		CMM	50.97	101.94
		CFM	1800	3600
		L/S	850	1699
EXTERNAL STATIC PRESSURE		mmAq	10	10
		Pa	100	100
CONDENSER			CROSS FIN COIL	
FAN			PROPELLER - DIRECT DRIVE	
FAN MOTOR			THREE PHASE INDUCTION MOTOR	
AIR FLOW		CMM	127.43	226.53
		CFM	4500	8000
		L/S	2123	3776
CONTROL	ROOM TEMPERATURE		THERMISTER	
	OPERATION		SLM	
DRAIN CONNECTION		mm/in	25.4 / 1	
DIMENSION	HEIGHT	mm/in	1000 / 39.4	1000 / 39.4
	WIDTH	mm/in	1100 / 43.3	1300 / 51.2
	DEPTH	mm/in	1530 / 60.2	1530 / 60.2
NET WEIGHT		kg	295	425
AIR FILTER			WASHABLE SARAN NET	
POWER SOURCE		V/Ph/Hz	380-415 / 3 / 50	
COMPRESSOR NO / TYPE			1 / SCROLL	
RATED RUNNING CURRENT		A	8.0	17.1
RATED INPUT POWER		W	4540	9600
LOCK ROTOR AMPERE		A	74	110
SOUND PRESSURE LEVEL		dBA	63	68
CASING	MATERIAL		GALVANISED MILD STEEL	
	EXTERNAL FINISHING		EPOXY POLYESTER POWDER	
	INSULATION		PE (10mm)	
	COLOUR		MIT BROWN / SILK GREY	
PACKING DIMENSION	HEIGHT	mm/in	1090 / 42.9	1090 / 42.9
	WIDTH	mm/in	1250 / 49.2	1450 / 57.1
	DEPTH	mm/in	1680 / 66.1	1680 / 66.1
PROTECTION DEVICES			HIGH PRESSURE SWITCH FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94.
3) NOMINAL COOLING CAPACITY IS BASED ON THE CONDITIONS BELOW :
a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR
4) ALLOWABLE OPERATING RANGE :
a) COOLING - 21.0°C DB / 15.0°C WB INDOOR & 20.0°C DB OUTDOOR TO 35.0°C DB / 24.0°C WB INDOOR & 46.0°C DB OUTDOOR.

Cooling Model (50Hz – R22)

MODEL			MRT080A	MRT100A	MRT150A	MRT200A
TOTAL COOLING CAPACITY		kcal/h	20200	25200	37800	50400
		kW	23.4	29.3	44.0	58.6
		Btu/h	80000	100000	150000	200000
SENSIBLE COOLING CAPACITY		kcal/h	12730	17040	25280	34400
		kW	14.8	19.8	29.4	40.0
		Btu/h	50500	67600	100300	136500
RATED TOTAL POWER CONSUMPTION		W	8100	10500	15600	20700
RATED RUNNING CURRENT		A	15.4	18.5	29.0	35.7
POWER SOURCE		V/Ph/Hz	380 - 415 / 3 / 50			
CAPACITY STEPS		%	0 - 100		0 - 50 - 100	
REFRIGERANT			R22 (FACTORY CHARGED)			
REFRIGERANT CHARGE		kg	4.0	5.9	2 x 4.5	2 x 5.9
REFRIGERANT CONTROL			CAPILLARY TUBE			
EVAPORATOR			CROSS FIN COIL			
FIN	MATERIAL		ALUMINIUM			
	THICKNESS	mm/in	0.12(0.005)			
ROW / FIN PER INCH			3 / 14	4 / 14	2 x 3 / 14	2 x 4 / 14
FACE AREA		m^2/ft^2	0.647 / 6.96		2 x 0.569 / 6.12	
TUBE	MATERIAL		SEAMLESS COPPER			
	WALL THICKNESS	mm(in)	0.33(0.013)			
	DIAMETER	mm(in)	9.52(3/8)			
EVAPORATOR FAN			CENTRIFUGAL (GALVANISED STEEL AND PLASTIC) - BELT DRIVE		CENTRIFUGAL (PLASTIC) - BELT DRIVE	
FAN MOTOR			THREE PHASE SQUIRREL CAGE INDUCTION MOTOR			
NO OF FAN MOTOR / RATED OUTPUT		kW	1 / 1.1	1 / 1.5	1 / 2.2	1 / 3.7
AIR FLOW		CMM	80	100	160	190
		CFM	2826	3532	5651	6710
		L/S	1333	1667	2667	3167
EXTERNAL STATIC PRESSURE		mmAq	10		20	
		Pa	100		200	
CONDENSER			CROSS FIN COIL			
CONDENSER FAN			PROPELLER - DIRECT DRIVE			
FAN MOTOR			THREE PHASE INDUCTION MOTOR			
AIR FLOW		CMM	160		320	
		CFM	5651		11302	
		L/S	2667		5333	
CONTROL	ROOM TEMPERATURE		THERMOSTAT - OPTIONAL			
	OPERATION		LCD CONTROL - STD			
DRAIN CONNECTION		mm/in	25.4 / 1			
DIMENSION	HEIGHT	mm/in	1000 / 39.37		1200 / 47.24	
	WIDTH	mm/in	1300 / 51.18		1990 / 78.35	
	DEPTH	mm/in	1530 / 60.24		1670 / 65.74	
NET WEIGHT		kg	370	400	665	765
AIR FILTER			WASHABLE SARAN NET			
POWER SOURCE		V/Ph/Hz	380 - 415 / 3 / 50			
COMPRESSOR NO / TYPE			1 / SCROLL		2 / SCROLL	
RATED RUNNING CURRENT		A	11.8	14.5	22.4	28.2
RATED INPUT POWER		W	6400	8100	12800	16200
LOCK ROTOR AMPERE		A	95	125	95 x 2	125 x 2
SOUND PRESSURE LEVEL		dBA	65	66	70	70
CASING	MATERIAL		ELECTRO GALVANISED MILD STEEL			
	EXTERNAL FINISHING		EPOXY POLYESTER POWDER			
	INSULATION		PE (10mm)			
	COLOUR		MIT BROWN/SILK GREY			
PACKING DIMENSION	HEIGHT	mm/in	1090 / 42.91		1320 / 51.97	
	WIDTH	mm/in	1450 / 57.09		2100 / 82.68	
	DEPTH	mm/in	1680 / 66.14		1810 / 71.26	
PROTECTION DEVICES			HIGH PRESSURE SWITCH FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)			

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a) COOLING - 26.7° C DB / 19.4 ° C WB INDOOR AND 35 ° C DB OUTDOOR.
4) ALLOWABLE OPERATING RANGE :
a) COOLING - 21.0° C DB/15.0° C WB INDOOR & 20.0° C DB OUTDOOR TO 35.0° C DB/24.0° C WB INDOOR & 46.0° C DB OUTDOOR.

Cooling Model (50Hz – R22)

MODEL			MRT250A	MRT300A
TOTAL COOLING CAPACITY	OUTDOOR 35°C DB	kcal/h	63000	75600
		kW	73	88
		Btu/h	250000	300000
	OUTDOOR 46°C DB	kcal/h	55400	69600
		kW	64	81
		Btu/h	220000	276000
SENSIBLE COOLING CAPACITY	OUTDOOR 35°C DB	kcal/h	46400	60500
		kW	54	70
		Btu/h	184000	240000
	OUTDOOR 46°C DB	kcal/h	45900	58500
		kW	53	68
		Btu/h	182000	232000
RATED TOTAL POWER CONSUMPTION		W	23600	33200
RATED RUNNING CURRENT		A	43	58
POWER SOURCE		V/Ph/Hz	415 / 3 / 50	
CAPACITY STEPS		%	0 - 50 - 100	
REFRIGERANT			R22 (FACTORY CHARGED)	
REFRIGERANT CHARGE		kg	10.5 x 2	11 x 2
REFRIGERANT CONTROL			TXV	
EVAPORATOR			CROSS FIN COIL	
FIN	MATERIAL		ALUMINIUM	
	THICKNESS	mm/in	0.12(0.005)	
ROW / FIN PER INCH			4 / 13	4 / 14
FACE AREA		m^2/ft^2	0.9144 / 9.84	
TUBE	MATERIAL		SEAMLESS COPPER	
	WALL THICKNESS	mm(in)	0.33(0.013)	
	INSULATION	mm(in)	9.52(5/8)	
FAN			CENTRIFUGAL (GALVANISED STEEL) - BELT DRIVE	
FAN MOTOR			THREE PHASE SQUIRREL CAGE INDUCTION MOTOR	
NO OF FAN MOTOR / OUTPUT		kW	1 / 5.5	1 / 7.5
AIR FLOW		CMM	230	270
		CFM	8000	9600
		L/S	3770	4530
EXTERNAL STATIC PRESSURE		mmAq	30	
		Pa	300	
CONDENSER			CROSS FIN COIL	
FAN			PROPELLER - DIRECT DRIVE	
FAN MOTOR			THREE PHASE INDUCTION MOTOR	
AIR FLOW		CMM	570	
		CFM	20000	
		L/S	9440	
CONTROL	ROOM TEMPERATURE		Thermister	
	OPERATION		SEQUENTIAL CONTROLLER	
DRAIN CONNECTION		mm/in	25.4 / 1	
DIMENSION	HEIGHT	mm/in	1735 / 68	
	WIDTH	mm/in	2250 / 88.5	
	DEPTH	mm/in	2800 / 110	
NET WEIGHT		kg	1200	1350
AIR FILTER			FIELD INSTALLED	
POWER SOURCE		V/Ph/Hz	415 / 3 / 50	
COMPRESSOR NO / TYPE			2 / SCROLL	
RATED RUNNING CURRENT		A	19.6 x2	27.2 x2
RATED INPUT POWER		W	10200 x2	13300 x2
LOCK ROTOR AMPERE		A	110 x2	198 x2
CASING	MATERIAL		ELECTRO GALVANISED MILD STEEL	
	EXTERNAL FINISHING		EPOXY POLYESTER POWDER	
	INSULATION		PE (10mm)	
	COLOUR		MIT BROWN/SILK GREY	
PACKING DIMENSION	HEIGHT	mm/in	1900 / 75	
	WIDTH	mm/in	2250 / 88.5	
	DEPTH	mm/in	2900 / 114	
PROTECTION DEVICES			HIGH PRESSURE SWITCH FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)	

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a) COOLING - 21.0° C DB/15.0° C WB INDOOR & 20.0° C DB OUTDOOR TO 35.0° C DB/24.0° C WB INDOOR & 46.0° C DB OUTDOOR.

Cooling Model (50Hz – R407C)

MODEL			M4RT060A	M4RT120A
TOTAL		kcal/h	14868	27720
COOLING		kW	17.3	32.2
CAPACITY		Btu/h	59000	110000
SENSIBLE		kcal/h	10259	20790
COOLING		kW	11.9	24.2
CAPACITY		Btu/h	40710	82500
RATED TOTAL POWER INPUT		W	5890	12180
RATED RUNNING CURRENT		A	10.9	22.8
POWER SOURCE		V/Ph/Hz	380~415 / 3 / 50	
CAPACITY STEPS		%	0-100	0-100
REFRIGERANT			R407C (FACTORY CHARGED)	
REFRIGERANT CHARGE		kg	4.6	5.6
REFRIGERANT CONTROL			TXV	
EVAPORATOR			CROSS FIN COIL	
FIN	MATERIAL		ALUMINIUM	
	THICKNESS	mm/in	0.11 / 0.004	0.12 / 0.005
ROW / FIN PER INCH			3 / 16	4 / 14
FACE AREA		m^2/ft^2	0.53 / 5.70	0.65 / 6.99
TUBE	MATERIAL		SEAMLESS INNER GROOVED COPPER	
	WALL THICKNESS	mm(in)	0.33 / 0.013	
	DIAMETER	mm(in)	9.52 / 0.375	
FAN			CENTRIFUGAL (GALVANISED STEEL) - BELT DRIVE	
FAN MOTOR			THREE PHASE SQUIRREL CAGE INDUCTION MOTOR	
NO OF FAN MOTOR / OUTPUT			1 / 0.75kW	1 / 1.5kW
AIR FLOW		CMM	50.97	101.94
		CFM	1800	3600
		L/S	850	1699
EXTERNAL STATIC PRESSURE		mmAq	10	10
		Pa	100	100
CONDENSER			CROSS FIN COIL	
FAN			PROPELLER - DIRECT DRIVE	
FAN MOTOR			THREE PHASE INDUCTION MOTOR	
AIR FLOW		CMM	127.43	226.53
		CFM	4500	8000
		L/S	2123	3776
CONTROL	ROOM TEMPERATURE		THERMISTER	
	OPERATION		SLM	
DRAIN CONNECTION		mm/in	25.4 / 1	
DIMENSION	HEIGHT	mm/in	1000 / 39.4	1000 / 39.4
	WIDTH	mm/in	1100 / 43.3	1300 / 51.2
	DEPTH	mm/in	1530 / 60.2	1530 / 60.2
NET WEIGHT		kg	295	425
AIR FILTER			WASHABLE SARAN NET	
POWER SOURCE		V/Ph/Hz	380-415 / 3 / 50	
COMPRESSOR NO / TYPE			1 / SCROLL	
RATED RUNNING CURRENT		A	8.5	17.8
RATED INPUT POWER		W	4820	10220
LOCK ROTOR AMPERE		A	74	118
SOUND PRESSURE LEVEL		dBA	63	68
CASING	MATERIAL		GALVANISED MILD STEEL	
	EXTERNAL FINISHING		EPOXY POLYESTER POWDER	
	INSULATION		PE (10mm)	
	COLOUR		MIT BROWN / SILK GREY	
PACKING DIMENSION	HEIGHT	mm/in	1090 / 42.9	1090 / 42.9
	WIDTH	mm/in	1250 / 49.2	1450 / 57.1
	DEPTH	mm/in	1680 / 66.1	1680 / 66.1
PROTECTION DEVICES			HIGH PRESSURE SWITCH FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)	

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4) ALLOWABLE OPERATING RANGE :
a) COOLING - 21.0°C DB / 15.0°C WB INDOOR & 20.0°C DB OUTDOOR TO 35.0°C DB / 24.0°C WB INDOOR & 46.0°C DB OUTDOOR.

Cooling Model (50Hz – R407C)

MODEL			M4RT080A	M4RT100A	M4RT150A	M4RT200A
TOTAL COOLING CAPACITY		kcal/h	18144	23940	35279	47879
		kW	21.1	27.8	41.0	55.7
		Btu/h	72000	95000	140000	190000
SENSIBLE COOLING CAPACITY		kcal/h	13431	18194	25754	33994
		kW	12.7	21.2	30.0	39.5
		Btu/h	53300	72200	102200	134900
RATED TOTAL POWER CONSUMPTION		W	8700	11600	17200	25100
RATED RUNNING CURRENT		A	16.3	20.2	32.1	43.8
POWER SOURCE		V/Ph/Hz	380 - 415 / 3 / 50			
CAPACITY STEPS		%	0 - 100		0 - 50 - 100	
REFRIGERANT			R407C (FACTORY CHARGED)			
REFRIGERANT CHARGE		kg	4.6	5.9	2 x 3.9	2 x 4.2
REFRIGERANT CONTROL			CAPILLARY TUBE			
EVAPORATOR			CROSS FIN COIL			
FIN	MATERIAL		ALUMINIUM			
	THICKNESS	mm/in	0.12(0.005)			
ROW / FIN PER INCH			3 / 14	4 / 14	2 x 3 / 14	2 x 4 / 14
FACE AREA		m^2/ft^2	0.647 / 6.96		2 x 0.569 / 6.12	
TUBE	MATERIAL		SEAMLESS COPPER			
	WALL THICKNESS	mm(in)	0.33(0.013)			
	DIAMETER	mm(in)	9.52(3/8)			
EVAPORATOR FAN			CENTRIFUGAL (GALVANISED STEEL) - BELT DRIVE		CENTRIFUGAL (PLASTIC) - BELT DRIVE	
FAN MOTOR			THREE PHASE SQUIRREL CAGE INDUCTION MOTOR			
NO OF FAN MOTOR / OUTPUT		kW	1 / 1.1	1 / 1.5	1 / 2.2	1 / 3.7
AIR FLOW		CMM	80	100	160	190
		CFM	2826	3532	5651	6710
		L/S	1333	1667	2667	3167
EXTERNAL STATIC PRESSURE		mmAq	10		20	
		Pa	100		200	
CONDENSER			CROSS FIN COIL			
CONDENSER FAN			PROPELLER - DIRECT DRIVE			
FAN MOTOR			THREE PHASE INDUCTION MOTOR			
AIR FLOW		CMM	160		320	
		CFM	5651		11302	
		L/S	2667		5333	
CONTROL	ROOM TEMPERATURE		THERMOSTAT - OPTIONAL			
	OPERATION		LCD CONTROL - STD			
DRAIN CONNECTION		mm/in	25.4 / 1			
DIMENSION	HEIGHT	mm/in	1000 / 39.37		1200 / 47.24	
	WIDTH	mm/in	1300 / 51.18		1990 / 78.35	
	DEPTH	mm/in	1530 / 60.24		1670 / 65.74	
NET WEIGHT		kg	370	400	665	765
AIR FILTER			WASHABLE SARAN NET			
POWER SOURCE		V/Ph/Hz	380 - 415 / 3 / 50			
COMPRESSOR NO / TYPE			1 / SCROLL		2 / SCROLL	
RATED RUNNING CURRENT		A	12.9	16.2	25.6	36.2
RATED INPUT POWER		W	6830	9030	13720	20320
LOCK ROTOR AMPERE		A	95	125	95 x 2	125 x 2
SOUND PRESSURE LEVEL		dBA	65	66	70	70
CASING	MATERIAL		ELECTRO GALVANISED MILD STEEL			
	EXTERNAL FINISHING		EPOXY POLYESTER POWDER			
	INSULATION		PE (10mm)			
	COLOUR		MIT BROWN/SILK GREY			
PACKING DIMENSION	HEIGHT	mm/in	1090 / 42.91		1320 / 51.97	
	WIDTH	mm/in	1450 / 57.09		2100 / 82.68	
	DEPTH	mm/in	1680 / 66.14		1810 / 71.26	
PROTECTION DEVICES			HIGH PRESSURE SWITCH FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)			

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4) ALLOWABLE OPERATING RANGE :
a) COOLING - 21.0° C DB/15.0° C WB INDOOR & 20.0° C DB OUTDOOR TO 35.0° C DB/24.0° C WB INDOOR & 46.0° C DB OUTDOOR.

Cooling Model (50Hz – R407C)

MODEL			M4RT250A	M4RT300A
TOTAL COOLING CAPACITY	OUTDOOR 35°C DB	kcal/h	58000	71300
		kW	67	83
		Btu/h	230000	283000
	OUTDOOR 46°C DB	kcal/h	47600	54800
		kW	55	64
		Btu/h	189000	217500
SENSIBLE COOLING CAPACITY	OUTDOOR 35°C DB	kcal/h	43400	52900
		kW	50	61
		Btu/h	172200	209880
	OUTDOOR 46°C DB	kcal/h	40000	48800
		kW	46	57
		Btu/h	158760	193580
RATED TOTAL POWER CONSUMPTION		W	28700	40160
RATED RUNNING CURRENT		A	53.0	68.5
POWER SOURCE		V/Ph/Hz	415 / 3 / 50	
CAPACITY STEPS		%	0 - 50 - 100	
REFRIGERANT			R22 (FACTORY CHARGED)	
REFRIGERANT CHARGE		kg	9.6 x 2	10.4 x 2
REFRIGERANT CONTROL			TXV	
EVAPORATOR			CROSS FIN COIL	
FIN	MATERIAL		ALUMINIUM	
	THICKNESS	mm/in	0.12(0.005)	
ROW / FIN PER INCH			4 / 14 x 2	4 / 14 x 2
FACE AREA		m^2/ft^2	0.9144 / 9.84 x 2	
TUBE	MATERIAL		SEAMLESS COPPER	
	WALL THICKNESS	mm(in)	0.33 (0.013)	
	DIAMETER	mm(in)	9.52 (3/8)	
FAN			CENTRIFUGAL (GALVANISED STEEL) - BELT DRIVE	
FAN MOTOR			THREE PHASE SQUIRREL CAGE INDUCTION MOTOR	
NO OF FAN MOTOR / OUTPUT		kW	1 / 5.5	1 / 7.5
AIR FLOW		CMM	230	260
		CFM	8000	9300
		L/S	3770	4390
EXTERNAL STATIC PRESSURE		mmAq	30	
		Pa	300	
CONDENSER			CROSS FIN COIL	
FAN			PROPELLER - DIRECT DRIVE	
FAN MOTOR			THREE PHASE INDUCTION MOTOR	
AIR FLOW		CMM	570	
		CFM	20000	
		L/S	9440	
CONTROL	ROOM TEMPERATURE		THERMISTER	
	OPERATION		SEQUENTIAL CONTROLLER	
DRAIN CONNECTION		mm/in	25.4 / 1	
DIMENSION	HEIGHT	mm/in	1735 / 68	
	WIDTH	mm/in	2250 / 88.5	
	DEPTH	mm/in	2800 / 110	
NET WEIGHT		kg	1200	1350
AIR FILTER			FIELD INSTALLED	
POWER SOURCE		V/Ph/Hz	415 / 3 / 50	
COMPRESSOR NO / TYPE			2 / SCROLL	
RATED RUNNING CURRENT		A	36.7	49.6
RATED INPUT POWER		W	19800	29260
LOCK ROTOR AMPERE		A	125 x 2	198 x 2
SOUND PRESSURE LEVEL		dBA	74	74
CASING	MATERIAL		ELECTRO GALVANISED MILD STEEL	
	EXTERNAL FINISHING		EPOXY POLYESTER POWDER	
	INSULATION		PE (10mm)	
	COLOUR		LIGHT GREY	
PACKING DIMENSION	HEIGHT	mm/in	1900 / 75	
	WIDTH	mm/in	2250 / 88.5	
	DEPTH	mm/in	2900 / 114	
PROTECTION DEVICES			HIGH PRESSURE SWITCH FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING CAPACITY IS BASED ON THE CONDITIONS BELOW :

a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR

4) CAPACITY IS GROSS CAPACITY WHICH DOES NOT INCLUDE A DEDUCTION FOR EVAPORATOR FAN MOTOR HEAT.

Heatpump Model (50Hz – R22)

MODEL			MRT080AR	MRT100AR	MRT150AR	MRT200AR
TOTAL COOLING CAPACITY		kcal/h	20200	25200	37800	50400
		kW	23.4	29.3	44.0	58.6
		Btu/h	80000	100000	150000	200000
SENSIBLE COOLING CAPACITY		kcal/h	16100	20200	30200	40300
		kW	18.8	23.4	35.2	46.9
		Btu/h	64000	80000	120000	160000
TOTAL HEATING CAPACITY		kcal/h	19800	26500	39100	52400
		kW	23.0	30.8	45.4	61.0
		Btu/h	78600	105000	155000	208000
RATED TOTAL POWER CONSUMPTION (COOLING)		W	9400	11860	18600	23500
RATED TOTAL POWER CONSUMPTION (HEATING)		W	7800	10050	15400	20400
RATED RUNNING CURRENT (COOLING)		A	16.8	20.5	33.0	39.2
RATED RUNNING CURRENT (HEATING)		A	14.8	18.2	29.0	35.0
POWER SOURCE		V/Ph/Hz	380 - 415 / 3 / 50			
CAPACITY STEPS		%	0 - 100		0 - 50 - 100	
REFRIGERANT			R22 (FACTORY CHARGED)			
REFRIGERANT CHARGE		kg	4.7	5.6	2 x 4.7	2 x 5.6
REFRIGERANT CONTROL			CAPILLARY TUBE			
EVAPORATOR			CROSS FIN COIL			
FIN	MATERIAL		ALUMINIUM			
	THICKNESS	mm/in	0.12(0.005)			
ROW / FIN PER INCH			3 / 15	4 / 15	2 x 3 / 15	2 x 4 / 15
FACE AREA		m^2/ft^2	0.647 / 6.96		2 x 0.569 / 6.12	
TUBE	MATERIAL		SEAMLESS COPPER			
	WALL THICKNESS	mm(in)	0.33(0.013)			
	DIAMETER	mm(in)	9.52(3/8)			
EVAPORATOR FAN			CENTRIFUGAL (GALVANISED STEEL AND PLASTIC) - BELT DRIVE		CENTRIFUGAL (PLASTIC) - BELT DRIVE	
FAN MOTOR			THREE PHASE SQUIRREL CAGE INDUCTION MOTOR			
NO OF FAN MOTOR / RATED OUTPUT		kW	1 / 1.1	1 / 1.5	1 / 2.2	1 / 3.7
AIR FLOW		CMM	80	100	160	190
		CFM	2826	3532	5651	6710
		L/S	1333	1667	2667	3167
EXTERNAL STATIC PRESSURE		mmAq	10		20	
		Pa	100		200	
CONDENSER			CROSS FIN COIL			
CONDENSER FAN			PROPELLER - DIRECT DRIVE			
FAN MOTOR			THREE PHASE INDUCTION MOTOR			
AIR FLOW		CMM	160		320	
		CFM	5651		11302	
		L/S	2667		5333	
CONTROL	ROOM TEMPERATURE		THERMOSTAT - OPTIONAL			
	OPERATION		LCD CONTROL - STD			
DRAIN CONNECTION		mm/in	25.4 / 1			
DIMENSION	HEIGHT	mm/in	1000 / 39.37		1200 / 47.24	
	WIDTH	mm/in	1300 / 51.18		1990 / 78.35	
	DEPTH	mm/in	1530 / 60.24		1800 / 70.87	
NET WEIGHT		kg	385	415	700	800
AIR FILTER			WASHABLE SARAN NET			
POWER SOURCE		V/Ph/Hz	380 - 415 / 3 / 50			
COMPRESSOR NO / TYPE			1 / RECIP		2 / RECIP	
RATED RUNNING CURRENT (COOLING)		A	13.2	16.5	26.4	31.7
RATED RUNNING CURRENT (HEATING)		A	11.2	14.2	22.4	27.5
RATED INPUT POWER (COOLING)		W	7700	9460	15400	19000
RATED INPUT POWER (HEATING)		W	6100	7650	12200	15900
LOCK ROTOR AMPERE		A	84	78	84 x 2	78 x 2
SOUND PRESSURE LEVEL		dBA	65	66	70	70
CASING	MATERIAL		ELECTRO GALVANISED MILD STEEL			
	EXTERNAL FINISHING		EPOXY POLYESTER POWDER			
	INSULATION		PE (10mm)			
	COLOUR		MIT BROWN/SILK GREY			
PACKING DIMENSION	HEIGHT	mm/in	1090 / 42.91		1320 / 51.97	
	WIDTH	mm/in	1450 / 57.09		2100 / 82.68	
	DEPTH	mm/in	1680 / 66.14		1938 / 76.30	
PROTECTION DEVICES			HIGH PRESSURE SWITCH, FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN, OUTDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)			

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94
3) NOMINAL COOLING CAPACITY IS BASED ON THE CONDITIONS BELOW :
a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR
b) HEATING - 21.0°C DB INDOOR AND 7.0°C DB / 6.0°C WB OUTDOOR
4) ALLOWABLE OPERATING RANGE :
a) COOLING - 21.0°C DB / 15.0°C WB INDOOR AND 20.0°C DB OUTDOOR TO 35.0°C DB / 24.0°C WB INDOOR AND 46.0°C DB OUTDOOR
b) HEATING - 21.0°C DB / 15.0°C WB INDOOR AND -8.0°C DB OUTDOOR TO 21.0°C DB INDOOR AND 21.0°C DB / 15.0°C WB OUTDOOR

Cooling Model (50Hz – R22)

MODEL				MRT250AR	MRT300AR
TOTAL COOLING CAPACITY	OUTDOOR 35°C DB		kcal/h	59200	73600
			kW	69	86
			Btu/h	235000	292000
	OUTDOOR 46°C DB		kcal/h	48100	58500
			kW	56	68
			Btu/h	191000	232200
SENSIBLE COOLING CAPACITY	OUTDOOR 35°C DB		kcal/h	46200	57400
			kW	54	67
			Btu/h	183300	227800
	OUTDOOR 46°C DB		kcal/h	42400	45600
			kW	49	53
			Btu/h	168100	181100
TOTAL HEATING CAPACITY			kcal/h	63500	74300
			kW	74	86
			Btu/h	252000	295000
RATED TOTAL POWER CONSUMPTION (COOLING)			W	23700	33200
RATED TOTAL POWER CONSUMPTION (HEATING)			W	22400	28700
RATED RUNNING CURRENT (COOLING)			A	43.0	57.8
RATED RUNNING CURRENT (HEATING)			A	41.2	52.2
POWER SOURCE			V/Ph/Hz	415 / 3 / 50	
CAPACITY STEPS			%	0 - 50 - 100	
REFRIGERANT				R22 (FACTORY CHARGED)	
REFRIGERANT CHARGE			kg	10.0 x2	9.4 x2
REFRIGERANT CONTROL				TXV	
EVAPORATOR				CROSS FIN COIL	
FIN	MATERIAL			ALUMINIUM	
	THICKNESS		mm/in	0.12(0.005)	
ROW / FIN PER INCH				4 / 13	4 / 14
FACE AREA			m^2/ft^2	0.9144 / 9.84	
TUBE	MATERIAL			SEAMLESS COPPER	
	WALL THICKNESS		mm(in)	0.33(0.013)	
	INSULATION		mm(in)	9.52(5/8)	
FAN				CENTRIFUGAL (GALVANISED STEEL) - BELT DRIVE	
FAN MOTOR				THREE PHASE SQUIRREL CAGE INDUCTION MOTOR	
NO OF FAN MOTOR / OUTPUT			kW	1 / 5.5	1 / 7.5
AIR FLOW			CMM	230	270
			CFM	8000	9600
			L/S	3770	4530
EXTERNAL STATIC PRESSURE			mmAq	30	
			Pa	300	
CONDENSER				CROSS FIN COIL	
FAN				PROPELLER - DIRECT DRIVE	
FAN MOTOR				THREE PHASE INDUCTION MOTOR	
AIR FLOW			CMM	570	
			CFM	20000	
			L/S	9440	
CONTROL	ROOM TEMPERATURE			Thermister	
	OPERATION			SEQUENTIAL CONTROLLER	
DRAIN CONNECTION			mm/in	25.4 / 1	
DIMENSION	HEIGHT		mm/in	1735 / 68	
	WIDTH		mm/in	2250 / 88.5	
	DEPTH		mm/in	2800 / 110	
NET WEIGHT			kg	1200	1350
AIR FILTER				FIELD INSTALLED	
POWER SOURCE			V/Ph/Hz	415 / 3 / 50	
COMPRESSOR NO / TYPE				2 / SCROLL	
RATED RUNNING CURRENT (COOLING)			A	12.7 x2	18.2 x2
RATED RUNNING CURRENT (HEATING)			A	11.7 x2	16.5 x2
RATED INPUT POWER (COOLING)			W	7300 x2	11000 x2
RATED INPUT POWER (HEATING)			W	6800 x2	9000 x2
LOCK ROTOR AMPERE			A	110 x2	198 x2
CASING	MATERIAL			ELECTRO GALVANISED MILD STEEL	
	EXTERNAL FINISHING			EPOXY POLYESTER POWDER	
	INSULATION			PE (10mm)	
	COLOUR			MIT BROWN/SILK GREY	
PACKING DIMENSION	HEIGHT		mm/in	1900 / 75	
	WIDTH		mm/in	2250 / 88.5	
	DEPTH		mm/in	2900 / 114	
PROTECTION DEVICES				HIGH PRESSURE SWITCH FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94
3) NOMINAL COOLING CAPACITY IS BASED ON THE CONDITIONS BELOW :
a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR
b) HEATING - 21.0°C DB INDOOR AND 7.0°C DB / 6.0°C WB OUTDOOR
4) ALLOWABLE OPERATING RANGE :
a) COOLING - 21.0°C DB / 15.0°C WB INDOOR AND 20.0°C DB OUTDOOR TO 35.0°C DB / 24.0°C WB INDOOR AND 46.0°C DB OUTDOOR
b) HEATING - 21.0°C DB / 15.0°C WB INDOOR AND -8.0°C DB OUTDOOR TO 21.0°C DB INDOOR AND 21.0°C DB / 15.0°C WB OUTDOOR

Heatpump Model (50Hz – R407C)

MODEL			M4RT080AR	M4RT100AR	M4RT150AR	M4RT200AR
TOTAL COOLING CAPACITY		kcal/h	18144	22176	37547	47879
		kW	21102	25791	43669	55683
		Btu/h	72000	88000	149000	190000
SENSIBLE COOLING CAPACITY		kcal/h	13555	17073	27944	34954
		kW	15764	19856	32499	40652
		Btu/h	53790	67750	110890	138710
TOTAL HEATING CAPACITY		kcal/h	19404	25704	40319	57959
		kW	22567	29894	46893	67406
		Btu/h	77000	102000	160000	230000
RATED TOTAL POWER CONSUMPTION (COOLING)		W	8410	10820	16570	21160
RATED TOTAL POWER CONSUMPTION (HEATING)		W	7540	9810	15710	20300
RATED RUNNING CURRENT (COOLING)		A	16.0	20.6	32.2	39.9
RATED RUNNING CURRENT (HEATING)		A	15.4	19.3	31.2	38.4
POWER SOURCE		V/Ph/Hz	380 - 415 / 3 / 50			
CAPACITY STEPS		%	0 - 100		0 - 50 - 100	
REFRIGERANT			R407C (FACTORY CHARGED)			
REFRIGERANT CHARGE		kg	5.2	6.0	2 x 5.0	2 x 5.8
REFRIGERANT CONTROL			CAPILLARY TUBE			
EVAPORATOR			CROSS FIN COIL			
FIN	MATERIAL		ALUMINIUM			
	THICKNESS	mm/in	0.12(0.005)			
ROW / FIN PER INCH			3 / 15	4 / 15	2 x 3 / 15	2 x 4 / 15
FACE AREA		m^2/ft^2	0.647 / 6.96		2 x 0.569 / 6.12	
TUBE	MATERIAL		SEAMLESS COPPER			
	WALL THICKNESS	mm(in)	0.33(0.013)			
	DIAMETER	mm(in)	9.52(3/8)			
EVAPORATOR FAN			CENTRIFUGAL (GALVANISED STEEL AND PLASTIC) - BELT DRIVE		CENTRIFUGAL (PLASTIC) - BELT DRIVE	
FAN MOTOR			THREE PHASE SQUIRREL CAGE INDUCTION MOTOR			
NO OF FAN MOTOR / OUTPUT		kW	1 / 1.1	1 / 1.5	1 / 2.2	1 / 3.7
AIR FLOW		CMM	80	100	160	190
		CFM	2826	3532	5651	6710
		L/S	1333	1667	2667	3167
EXTERNAL STATIC PRESSURE		mmAq	10		20	
		Pa	100		200	
CONDENSER			CROSS FIN COIL			
CONDENSER FAN			PROPELLER - DIRECT DRIVE			
FAN MOTOR			THREE PHASE INDUCTION MOTOR			
AIR FLOW		CMM	160		320	
		CFM	5651		11302	
		L/S	2667		5333	
CONTROL	ROOM TEMPERATURE		THERMOSTAT - OPTIONAL			
	OPERATION		LCD CONTROL - STD			
DRAIN CONNECTION		mm/in	25.4 / 1			
DIMENSION	HEIGHT	mm/in	1000 / 39.37		1200 / 47.24	
	WIDTH	mm/in	1300 / 51.18		1990 / 78.35	
	DEPTH	mm/in	1530 / 60.24		1800 / 70.87	
NET WEIGHT		kg	385	415	700	800
AIR FILTER			WASHABLE SARAN NET			
POWER SOURCE		V/Ph/Hz	380 - 415 / 3 / 50			
COMPRESSOR NO / TYPE			1 / SCROLL		2 / SCROLL	
RATED RUNNING CURRENT (COOLING)		A	13.0	16.3	26.1	32.0
RATED RUNNING CURRENT (HEATING)		A	12.4	15.0	25.1	30.5
RATED INPUT POWER (COOLING)		W	7000	8700	13700	17180
RATED INPUT POWER (HEATING)		W	6130	7690	12840	16320
LOCK ROTOR AMPERE		A	95	125	95 x2	125 x2
SOUND PRESSURE LEVEL		dBA	65	66	70	70
CASING	MATERIAL		ELECTRO GALVANISED MILD STEEL			
	EXTERNAL FINISHING		EPOXY POLYESTER POWDER			
	INSULATION		PE (10mm)			
	COLOUR		MIT BROWN/SILK GREY			
PACKING DIMENSION	HEIGHT	mm/in	1090 / 42.91		1320 / 51.97	
	WIDTH	mm/in	1450 / 57.09		2100 / 82.68	
	DEPTH	mm/in	1680 / 66.14		1938 / 76.30	
PROTECTION DEVICES			HIGH PRESSURE SWITCH, FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN, OUTDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)			

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-89
3) NOMINAL COOLING CAPACITY IS BASED ON THE CONDITIONS BELOW :
a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR
b) HEATING - 21.0°C DB INDOOR AND 7.0°C DB / 6.0°C WB OUTDOOR
4) ALLOWABLE OPERATING RANGE :
a) COOLING - 21.0°C DB / 15.0°C WB INDOOR AND 20.0°C DB OUTDOOR TO 35.0°C DB / 24.0°C WB INDOOR AND 46.0°C DB OUTDOOR
b) HEATING - 21.0°C DB / 15.0°C WB INDOOR AND -8.0°C DB OUTDOOR TO 21.0°C DB INDOOR AND 21.0°C DB / 15.0°C WB OUTDOOR

5) CAPACITY IS GROSS CAPACITY WHICH DOES NOT INCLUDE A DEDUCTION FOR EVAPORATOR FAN MOTOR HEAT.

Heatpump Model (50Hz – R407C)

MODEL				M4RT250AR	M4RT300AR
TOTAL COOLING CAPACITY	OUTDOOR 35°C DB		kcal/h	58000	71300
			kW	67	83
			Btu/h	230000	283000
	OUTDOOR 46°C DB		kcal/h	43500	53800
			kW	51	63
			Btu/h	172500	213500
SENSIBLE COOLING CAPACITY	OUTDOOR 35°C DB		kcal/h	45100	53000
			kW	52	62
			Btu/h	178790	210440
	OUTDOOR 46°C DB		kcal/h	39100	46800
			kW	45	54
			Btu/h	155250	185750
TOTAL HEATING CAPACITY			kcal/h	64300	79400
			kW	75	92
			Btu/h	255000	315000
RATED TOTAL POWER CONSUMPTION (COOLING)			W	29200	38160
RATED TOTAL POWER CONSUMPTION (HEATING)			W	26220	34780
RATED RUNNING CURRENT (COOLING)			A	52.1	65.5
RATED RUNNING CURRENT (HEATING)			A	48.6	61.9
POWER SOURCE			V/Ph/Hz	415 / 3 / 50	
CAPACITY STEPS			%	0 - 50 - 100	
REFRIGERANT				R407C (FACTORY CHARGED)	
REFRIGERANT CHARGE			kg	9.4 x 2	9.6 x 2
REFRIGERANT CONTROL				TXV	
EVAPORATOR				CROSS FIN COIL	
FIN	MATERIAL			ALUMINIUM	
	THICKNESS		mm/in	0.12 (0.005)	
ROW / FIN PER INCH				4 / 14 x 2	4 / 14 x 2
FACE AREA			m^2/ft^2	0.9144 / 9.84 x 2	
TUBE	MATERIAL			SEAMLESS COPPER	
	WALL THICKNESS		mm(in)	0.33 (0.013)	
	DIAMETER		mm(in)	9.52 (3/8)	
FAN				CENTRIFUGAL (GALVANISED STEEL) - BELT DRIVE	
FAN MOTOR				THREE PHASE SQUIRREL CAGE INDUCTION MOTOR	
NO OF FAN MOTOR / OUTPUT			kW	1 / 5.5	1 / 7.5
AIR FLOW			CMM	230	260
			CFM	8000	9300
			L/S	3770	4390
EXTERNAL STATIC PRESSURE			mmAq	30	
			Pa	300	
CONDENSER				CROSS FIN COIL	
FAN				PROPELLER - DIRECT DRIVE	
FAN MOTOR				THREE PHASE INDUCTION MOTOR	
AIR FLOW			CMM	570	
			CFM	20000	
			L/S	9440	
CONTROL	ROOM TEMPERATURE			THERMISTER	
	OPERATION			SEQUENTIAL CONTROLLER	
DRAIN CONNECTION			mm/in	25.4 / 1	
DIMENSION	HEIGHT		mm/in	1735 / 68	
	WIDTH		mm/in	2250 / 88.5	
	DEPTH		mm/in	2800 / 110	
NET WEIGHT			kg	1200	1350
AIR FILTER				FIELD INSTALLED	
POWER SOURCE			V/Ph/Hz	415 / 3 / 50	
COMPRESSOR NO / TYPE				2 / SCROLL	
RATED RUNNING CURRENT (COOLING)			A	35.8	46.6
RATED RUNNING CURRENT (HEATING)			A	32.3	43.0
RATED INPUT POWER (COOLING)			W	20300	27260
RATED INPUT POWER (HEATING)			W	17320	23880
LOCK ROTOR AMPERE			A	125 x 2	198 x 2
SOUND PRESSURE LEVEL			dBA	74	74
CASING	MATERIAL			ELECTRO GALVANISED MILD STEEL	
	EXTERNAL FINISHING			EPOXY POLYESTER POWDER	
	INSULATION			PE (10mm)	
	COLOUR			LIGHT GREY	
PACKING DIMENSION	HEIGHT		mm/in	1900 / 75	
	WIDTH		mm/in	2250 / 88.5	
	DEPTH		mm/in	2900 / 114	
PROTECTION DEVICES				HIGH PRESSURE SWITCH FUSE. OVERLOAD CURRENT RELAY (COMP. & INDOOR FAN) INTERNAL THERMOSTAT (COMP. & OUTDOOR FAN)	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 210/240-94

3) NOMINAL COOLING CAPACITY IS BASED ON THE CONDITIONS BELOW :

a) COOLING - 26.7°C DB / 19.4°C WB INDOOR AND 35°C DB OUTDOOR

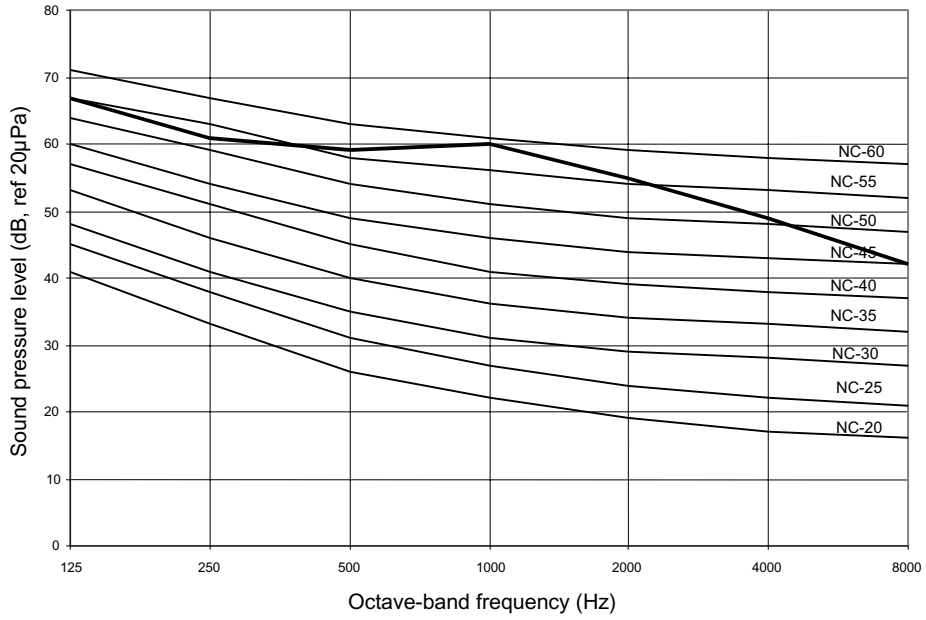
4) CAPACITY IS GROSS CAPACITY WHICH DOES NOT INCLUDE A DEDUCTION FOR EVAPORATOR FAN MOTOR HEAT.

Noise Level

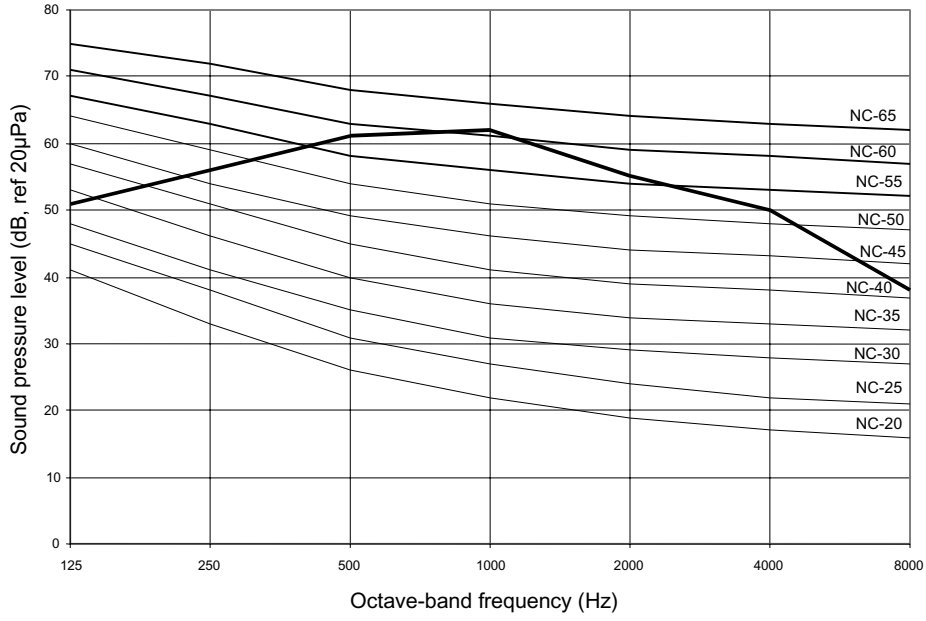
Model	1/1 Octave Sound Pressure Level (dB, ref 20μ Pa)							Overall A (dBA)	Noise Criteria
	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
M(4)RT060A	67	61	59	60	55	49	42	63	55
M(4)RT080A/AR	51	56	61	62	55	50	38	65	61
M(4)RT100A/AR	52	58	61	60	57	52	40	66	58
M(4)RT120A	68	64	62	65	60	53	45	68	64
M(4)RT150A/AR	58	59	65	67	61	54	42	70	66
M(4)RT200A/AR	57	60	63	66	61	53	41	70	65
M(4)RT250A/AR	76	72	70	71	65	55	46	74	66
M(4)RT300A/AR	77	72	71	72	65	55	46	74	68

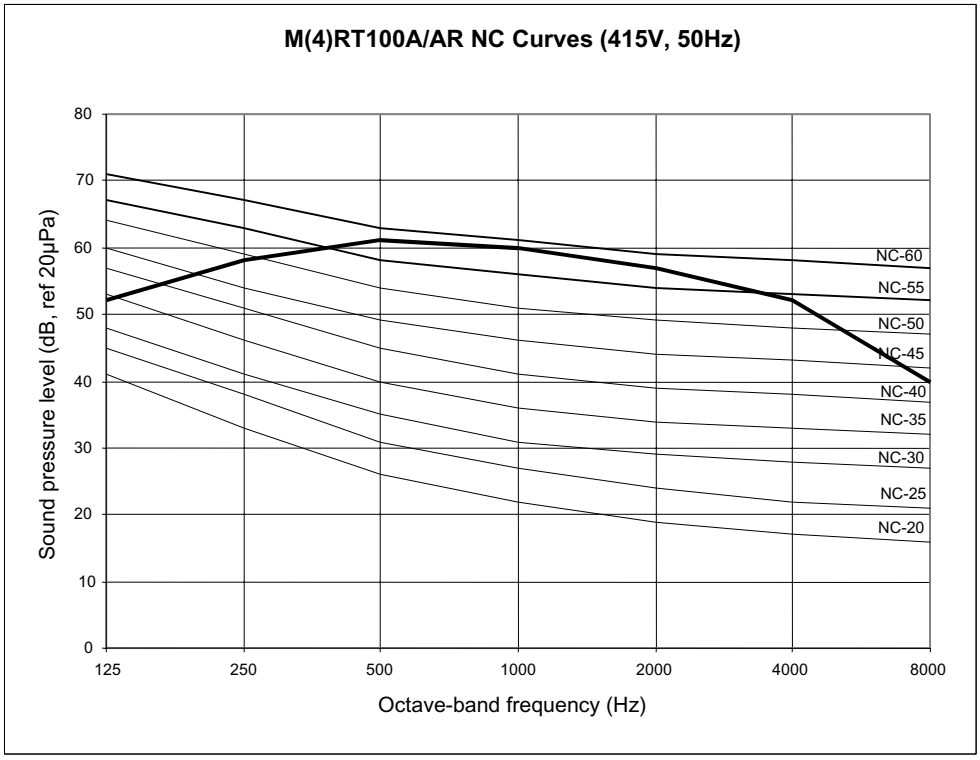
Note:
1. M(4)RT080A/AR, M(4)RT100A/AR, M(4)RT150A/AR and M(4)RT200A/AR
   - Microphone position: 1 m in front of the unit and 1 m above the floor.
2. M(4)RT060A, M(4)RT120A, M(4)RT250A/AR and M(4)RT300A/AR
   - Microphone position: 1 m from the service panel and 1 m height from the floor level.

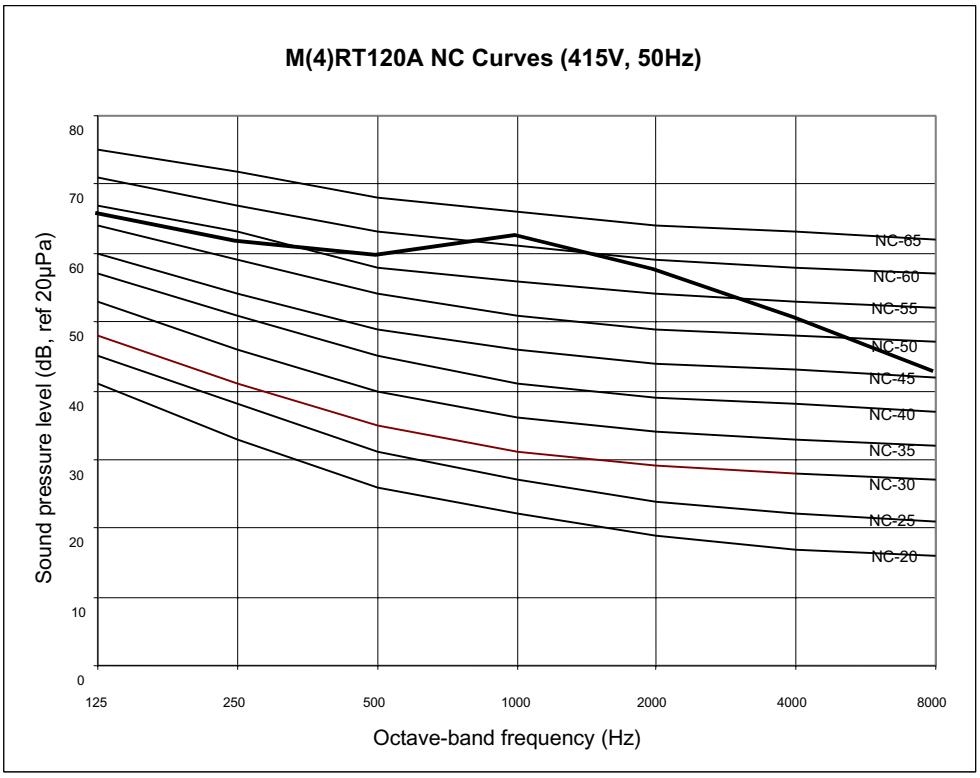
M(4)RT060A NC Curves (415V, 50Hz)



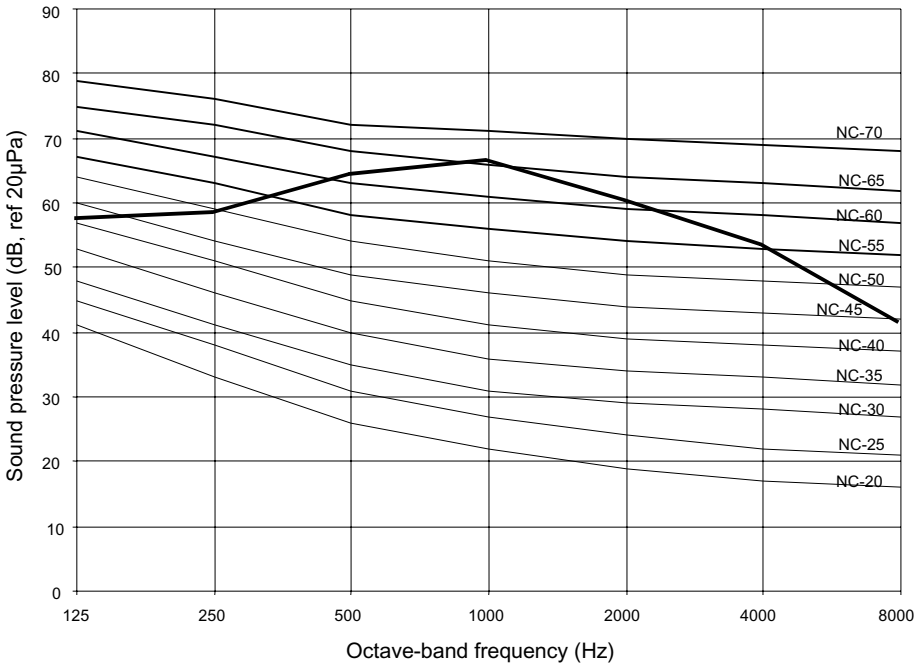
M(4)RT080A/AR NC Curves (415V, 50Hz)



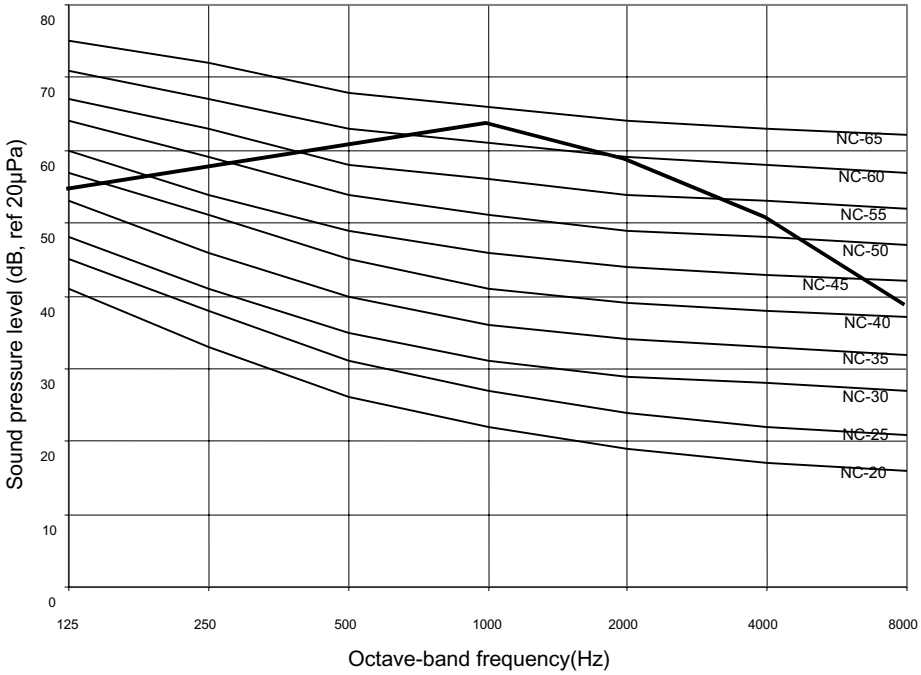

M(4)RT100A/AR NC Curves (415V, 50Hz)
Sound pressure level (dB, ref 20µPa)
80
70
60
50
40
30
20
10
0
125
250
500
1000
2000
4000
8000
Octave-band frequency (Hz)
NC-60
NC-55
NC-50
NC-45
NC-40
NC-35
NC-30
NC-25
NC-20


M(4)RT120A NC Curves (415V, 50Hz)
Sound pressure level (dB, ref 20µPa)
80
70
60
50
40
30
20
10
0
125
250
500
1000
2000
4000
8000
Octave-band frequency (Hz)
NC-65
NC-60
NC-55
NC-50
NC-45
NC-40
NC-35
NC-30
NC-25
NC-20

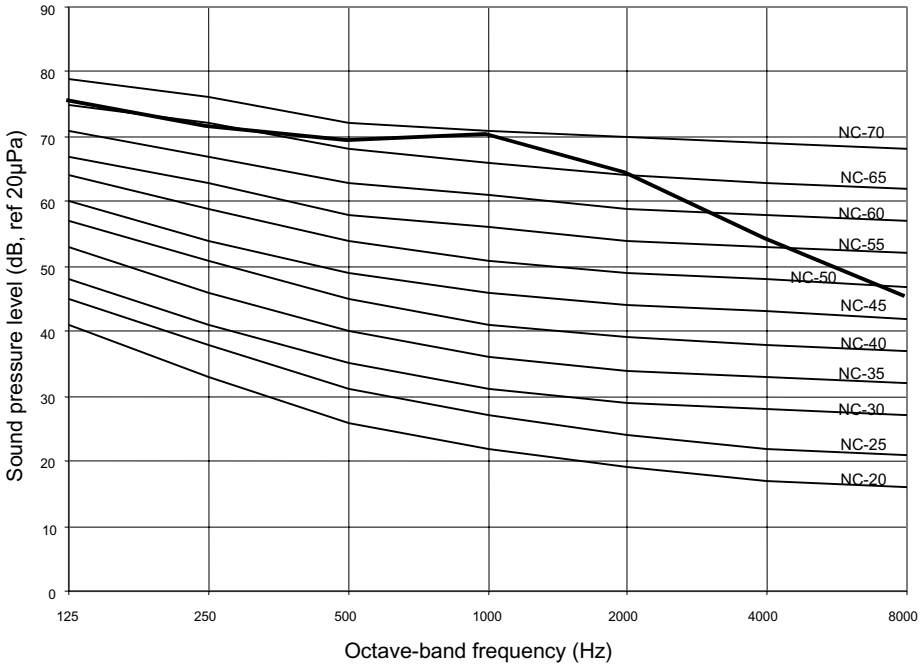
M(4)RT150A/AR NC Curves (415V, 50Hz)



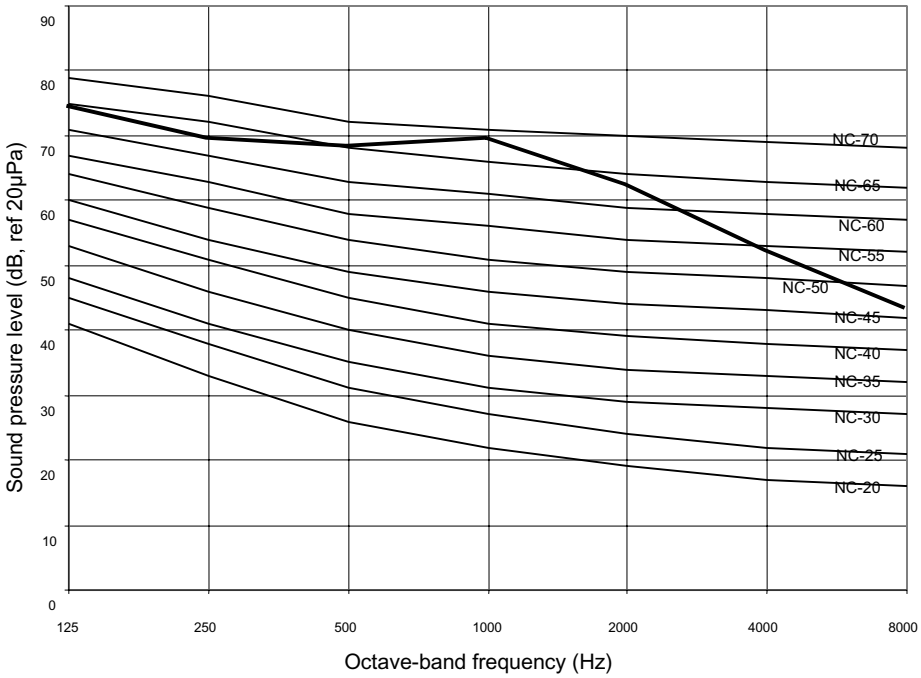
M(4)RT 200A/AR NC Curves (415V, 50Hz)



M(4)RT 250A/AR NC Curves



M(4)RT 300A/AR NC Curves (415V, 50Hz)



Performance Table

Cooling Only (R22)

Model : MRT060A

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	16.120	15.311	14.588	13.866	13.144	12.277	11.699	11.411	11.122
		SC	15.488	14.812	14.208	13.605	13.001	12.277	11.699	11.411	11.122
	15	TC	17.435	16.400	15.475	14.551	13.627	12.518	12.080	11.730	11.380
		SC	15.256	14.543	13.907	13.271	12.635	11.871	11.217	10.917	10.616
	18	TC	21.021	19.370	17.895	16.420	14.945	13.175	13.118	12.602	12.085
		SC	14.625	13.812	13.086	12.360	11.634	10.763	9.902	9.569	9.236
	19.4	TC	22.695	20.756	19.024	17.292	15.560	13.482	14.525	13.009	12.414
		SC	14.330	13.470	12.703	11.935	11.167	10.246	9.288	8.940	8.592
	20	TC	23.413	21.416	19.633	17.850	16.067	13.927	13.811	13.183	12.555
		SC	14.204	13.311	12.513	11.716	10.919	9.962	9.025	8.671	8.316
	22	TC	25.804	23.616	21.662	19.709	17.755	15.411	14.503	13.764	13.025
		SC	13.783	12.779	11.883	10.987	10.090	9.015	8.149	7.772	7.396
	24	TC	28.195	25.816	23.692	21.567	19.443	16.894	15.195	14.345	13.495
		SC	13.362	12.247	11.252	10.257	9.262	8.068	7.272	6.874	6.476

Model : MRT080A

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	19.121	18.600	18.135	17.670	17.205	16.647	16.275	16.089	15.903
		SC	19.015	18.517	18.071	17.626	17.181	16.647	16.275	16.089	15.903
	15	TC	20.659	20.001	19.413	18.825	18.238	17.532	16.828	16.578	16.327
		SC	18.064	17.704	17.382	17.060	16.738	16.352	15.587	15.419	15.251
	18	TC	24.855	23.822	22.899	21.976	21.053	19.946	18.336	17.910	17.484
		SC	15.472	15.488	15.502	15.516	15.531	15.548	13.711	13.592	13.473
	19.4	TC	26.813	25.605	24.526	23.447	22.368	21.073	20.379	18.532	18.024
		SC	14.262	14.453	14.625	14.796	14.967	15.172	12.836	12.739	12.643
	20	TC	27.653	26.318	25.126	23.934	22.742	21.312	19.342	18.798	18.255
		SC	13.743	13.902	14.044	14.186	14.328	14.498	12.460	12.374	12.287
	22	TC	30.450	28.694	27.126	25.559	23.991	22.110	20.347	19.687	19.026
		SC	12.015	12.064	12.108	12.153	12.197	12.250	11.210	11.156	11.102
	24	TC	33.247	31.070	29.127	27.183	25.240	22.907	21.353	20.575	19.798
		SC	10.286	10.226	10.173	10.119	10.066	10.002	9.959	9.938	9.916

Model : MRT100A

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C								
			19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	26.968	25.671	24.514	23.356	22.198	20.809	19.883	19.420	18.956
		SC	26.968	25.671	24.514	23.356	22.198	20.809	19.883	19.420	18.956
	15	TC	27.877	26.681	25.614	24.546	23.479	22.198	21.344	20.917	20.490
		SC	25.538	24.499	23.572	22.645	21.718	20.606	19.864	19.493	19.123
	18	TC	30.355	29.435	28.614	27.793	26.972	25.987	25.330	25.002	24.673
		SC	21.637	21.303	21.005	20.707	20.410	20.052	19.814	19.695	19.576
	19.4	TC	31.511	30.720	30.014	29.308	28.602	27.755	27.190	26.908	26.625
		SC	19.816	19.811	19.807	19.803	19.799	19.794	19.791	19.789	19.787
	20	TC	32.007	31.136	30.358	29.581	28.803	27.870	27.248	26.936	26.625
		SC	19.036	19.019	19.005	18.990	18.976	18.958	18.947	18.941	18.935
	22	TC	33.659	32.521	31.504	30.488	29.472	28.252	27.439	27.032	26.626
		SC	16.435	16.380	16.330	16.281	16.232	16.173	16.133	16.113	16.094
	24	TC	35.311	33.905	32.650	31.395	30.140	28.634	27.630	27.128	26.626
		SC	13.834	13.740	13.656	13.572	13.488	13.387	13.320	13.286	13.252

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

Cooling Only (R22)

Model : MRT120A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C								
° C	° C	kW	19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	33.116	31.226	29.538	27.851	26.163	24.138	22.788	22.113	21.438
		SC	33.116	31.226	29.538	27.851	26.163	24.138	22.788	22.113	21.438
	15	TC	36.035	33.539	31.309	29.080	26.851	24.176	23.487	22.666	21.846
		SC	32.530	30.607	28.891	27.174	25.457	23.397	21.924	21.231	20.538
	18	TC	43.998	39.846	36.140	32.433	28.726	24.278	25.391	24.175	22.959
		SC	30.933	28.921	27.125	25.328	23.532	21.377	19.568	18.825	18.083
	19.4	TC	47.714	42.790	38.394	33.998	29.601	24.326	27.971	24.879	23.478
		SC	30.187	28.134	26.301	24.467	22.634	20.434	18.469	17.703	16.937
	20	TC	49.306	44.292	39.814	35.336	30.859	25.485	26.660	25.180	23.700
		SC	29.868	27.775	25.906	24.037	22.168	19.926	17.997	17.222	16.446
	22	TC	54.615	49.296	44.547	39.798	35.049	29.351	27.930	26.186	24.442
		SC	28.803	26.578	24.591	22.604	20.617	18.233	16.427	15.618	14.809
	24	TC	59.923	54.301	49.280	44.260	39.240	33.216	29.200	27.191	25.183
		SC	27.738	25.381	23.276	21.171	19.066	16.540	14.856	14.014	13.172

Model : MRT150A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C								
° C	° C	kW	19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	47.461	44.040	40.986	37.932	34.878	31.213	28.770	27.549	26.327
		SC	47.461	44.040	40.986	37.932	34.878	31.213	28.770	27.549	26.327
	15	TC	47.984	44.809	41.973	39.138	36.303	32.901	30.633	29.499	28.365
		SC	43.738	41.040	38.632	36.223	33.815	30.924	28.997	28.034	27.071
	18	TC	49.411	46.904	44.666	42.427	40.189	37.503	35.713	34.818	33.922
		SC	33.585	32.859	32.211	31.562	30.914	30.136	29.617	29.358	29.098
	19.4	TC	50.077	47.882	45.922	43.962	42.003	39.651	38.084	37.300	36.516
		SC	28.847	29.041	29.214	29.387	29.560	29.768	29.906	29.976	30.045
	20	TC	50.362	48.198	46.265	44.333	42.401	40.082	38.536	37.763	36.990
		SC	26.817	27.166	27.478	27.790	28.102	28.476	28.726	28.851	28.975
	22	TC	51.313	49.251	47.409	45.568	43.726	41.517	40.043	39.307	38.570
		SC	20.048	20.916	21.691	22.466	23.241	24.171	24.791	25.101	25.411
	24	TC	52.265	50.304	48.553	46.803	45.052	42.951	41.551	40.851	40.150
		SC	13.280	14.666	15.904	17.142	18.380	19.866	20.856	21.351	21.846

Model : MRT200A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C								
° C	° C	kW	19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	55.510	52.585	49.974	47.363	44.751	41.618	39.529	38.484	37.440
		SC	53.129	50.705	48.542	46.378	44.214	41.618	39.529	38.484	37.440
	15	TC	57.029	54.367	51.990	49.613	47.237	44.385	41.261	40.231	39.200
		SC	50.544	48.593	46.852	45.111	43.369	41.279	38.555	37.815	37.076
	18	TC	61.172	59.226	57.489	55.752	54.015	51.930	45.986	44.993	44.001
		SC	43.495	42.834	42.244	41.654	41.064	40.356	35.897	35.989	36.083
	19.4	TC	63.106	61.494	60.055	58.617	57.178	55.451	52.387	47.216	46.241
		SC	40.206	40.147	40.094	40.041	39.988	39.925	34.657	35.138	35.619
	20	TC	63.934	62.198	60.648	59.098	57.548	55.688	49.136	48.169	47.201
		SC	38.796	38.681	38.578	38.475	38.372	38.248	34.125	34.773	35.420
	22	TC	66.696	64.545	62.625	60.704	58.783	56.478	52.286	51.344	50.402
		SC	34.097	33.794	33.523	33.253	32.982	32.658	32.354	33.556	34.758
	24	TC	69.458	66.892	64.601	62.309	60.018	57.268	55.435	54.519	53.602
		SC	29.397	28.907	28.469	28.031	27.593	27.068	30.582	32.339	34.096

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

Cooling Only (R22)

Model : MRT250A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C								
° C	° C	kW	19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	68.828	65.290	62.131	58.972	55.813	52.022	49.495	48.231	46.968
		SC	68.828	65.290	62.131	58.972	55.813	52.022	49.495	48.231	46.968
	15	TC	73.333	69.204	65.518	61.832	58.146	53.722	50.773	49.299	47.824
		SC	66.280	63.228	60.504	57.779	55.055	51.785	49.606	48.516	47.426
	18	TC	85.618	79.879	74.755	69.631	64.507	58.358	54.259	52.209	50.160
		SC	59.329	57.605	56.065	54.526	52.987	51.140	49.908	49.292	48.677
	19.4	TC	91.351	84.861	79.066	73.271	67.476	60.522	55.886	53.568	51.250
		SC	56.085	54.980	53.994	53.008	52.022	50.838	50.049	49.655	49.260
	20	TC	93.808	87.105	81.119	75.133	69.148	61.965	57.176	54.782	52.388
		SC	54.695	53.471	52.378	51.285	50.192	48.881	48.007	47.570	47.133
	22	TC	101.999	94.583	87.962	81.341	74.720	66.775	61.478	58.830	56.182
		SC	50.061	48.439	46.991	45.543	44.095	42.357	41.199	40.620	40.040
	24	TC	110.189	102.062	94.806	87.549	80.293	71.586	65.781	62.878	59.976
		SC	45.427	43.407	41.604	39.801	37.997	35.833	34.391	33.669	32.948

Model : MRT300A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C								
° C	° C	kW	19.4	25	30	35	40	46	50	52	54
26.7	13.9	TC	90.216	84.366	79.142	73.919	68.695	62.427	58.248	56.158	54.069
		SC	90.216	84.366	79.142	73.919	68.695	62.427	58.248	56.158	54.069
	15	TC	93.000	87.156	81.938	76.720	71.502	65.240	61.066	58.979	56.892
		SC	86.426	81.322	76.765	72.207	67.650	62.181	58.535	56.712	54.889
	18	TC	100.592	94.765	89.562	84.360	79.157	72.914	68.752	66.671	64.589
		SC	76.090	73.021	70.280	67.539	64.798	61.509	59.316	58.220	57.124
	19.4	TC	104.135	98.316	93.121	87.925	82.729	76.495	72.338	70.260	68.182
		SC	71.267	69.147	67.254	65.360	63.467	61.196	59.681	58.924	58.167
	20	TC	105.654	99.773	94.523	89.273	84.022	77.722	73.522	71.421	69.321
		SC	69.200	67.047	65.126	63.204	61.283	58.977	57.440	56.671	55.902
	22	TC	110.715	104.630	99.197	93.764	88.332	81.812	77.466	75.293	73.120
		SC	62.309	60.050	58.034	56.017	54.000	51.580	49.967	49.160	48.354
	24	TC	115.776	109.487	103.872	98.256	92.641	85.903	81.410	79.164	76.918
		SC	55.418	53.053	50.941	48.829	46.718	44.184	42.494	41.650	40.805

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

	MRT060A	MRT080A	MRT100A	MRT120A	MRT150A	MRT200A	MRT250A	MRT300A
Bypass Factor	0.47	0.45	0.51	0.40	0.40	0.42	0.46	0.38

Cooling Only (R407C)

Model : M4RT060A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	16.120	15.311	14.588	13.866	13.144	12.277
		SC	15.488	14.812	14.208	13.605	13.001	12.277
	15	TC	17.435	16.400	15.475	14.551	13.627	12.518
		SC	15.256	14.543	13.907	13.271	12.635	11.871
	18	TC	21.021	19.370	17.895	16.420	14.945	13.175
		SC	14.625	13.812	13.086	12.360	11.634	10.763
	19.4	TC	22.695	20.756	19.024	17.292	15.560	13.482
		SC	14.330	13.470	12.703	11.935	11.167	10.246
	20	TC	23.413	21.416	19.633	17.850	16.067	13.927
		SC	14.204	13.311	12.513	11.716	10.919	9.962
	22	TC	25.804	23.616	21.662	19.709	17.755	15.411
		SC	13.783	12.779	11.883	10.987	10.090	9.015
	24	TC	28.195	25.816	23.692	21.567	19.443	16.894
		SC	13.362	12.247	11.252	10.257	9.262	8.068

Model : M4RT080A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	17.209	16.740	16.322	15.903	15.485	14.982
		SC	17.114	16.665	16.264	15.864	15.463	14.982
	15	TC	18.593	18.001	17.472	16.943	16.414	15.779
		SC	16.258	15.933	15.644	15.354	15.065	14.717
	18	TC	22.370	21.440	20.609	19.779	18.948	17.952
		SC	13.924	13.939	13.952	13.965	13.977	13.993
	19.4	TC	24.132	23.044	22.073	21.102	20.131	18.965
		SC	12.835	13.008	13.162	13.316	13.470	13.655
	20	TC	24.887	23.686	22.613	21.541	20.468	19.181
		SC	12.369	12.512	12.639	12.767	12.895	13.048
	22	TC	27.405	25.825	24.414	23.003	21.592	19.899
		SC	10.813	10.858	10.898	10.937	10.977	11.025
	24	TC	29.923	27.963	26.214	24.465	22.716	20.617
		SC	9.257	9.204	9.156	9.107	9.059	9.002

Model : M4RT100A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	25.620	24.388	23.288	22.188	21.088	19.768
		SC	25.620	24.388	23.288	22.188	21.088	19.768
	15	TC	27.916	26.266	24.793	23.319	21.846	20.077
		SC	25.283	23.930	22.721	21.513	20.305	18.855
	18	TC	34.180	31.388	28.896	26.404	23.911	20.920
		SC	24.364	22.680	21.176	19.672	18.168	16.363
	19.4	TC	37.103	33.779	30.811	27.843	24.875	21.314
		SC	23.935	22.097	20.455	18.813	17.171	15.201
	20	TC	38.355	34.929	31.870	28.811	25.752	22.082
		SC	23.752	21.883	20.215	18.547	16.879	14.877
	22	TC	42.531	38.765	35.402	32.040	28.677	24.642
		SC	23.139	21.173	19.417	17.660	15.904	13.797
	24	TC	46.707	42.601	38.934	35.268	31.602	27.203
		SC	22.527	20.462	18.618	16.774	14.930	12.718

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

Cooling Only (R407C)

Model : M4RT120A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	31.460	29.664	28.061	26.458	24.855	22.931
		SC	31.460	29.664	28.061	26.458	24.855	22.931
	15	TC	34.234	31.862	29.744	27.626	25.508	22.967
		SC	30.904	29.077	27.446	25.815	24.185	22.228
	18	TC	41.798	37.854	34.333	30.811	27.290	23.064
		SC	29.386	27.475	25.768	24.062	22.356	20.308
	19.4	TC	45.328	40.651	36.474	32.298	28.121	23.110
		SC	28.678	26.727	24.986	23.244	21.502	19.412
	20	TC	46.841	42.077	37.823	33.569	29.316	24.211
		SC	28.374	26.386	24.611	22.835	21.060	18.930
	22	TC	51.884	46.831	42.320	37.808	33.297	27.883
		SC	27.363	25.249	23.361	21.474	19.586	17.321
	24	TC	56.927	51.586	46.816	42.047	37.278	31.555
		SC	26.351	24.111	22.112	20.112	18.112	15.713

Model : M4RT150A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	44.138	40.957	38.117	35.277	32.437	29.028
		SC	44.138	40.957	38.117	35.277	32.437	29.028
	15	TC	44.625	41.672	39.035	36.399	33.762	30.598
		SC	40.676	38.168	35.928	33.688	31.448	28.760
	18	TC	45.952	43.621	41.539	39.458	37.376	34.878
		SC	31.234	30.559	29.956	29.353	28.750	28.026
	19.4	TC	46.571	44.530	42.708	40.885	39.063	36.876
		SC	26.828	27.008	27.169	27.330	27.491	27.684
	20	TC	46.837	44.824	43.027	41.230	39.433	37.276
		SC	24.940	25.264	25.555	25.845	26.135	26.483
	22	TC	47.721	45.803	44.091	42.378	40.665	38.610
		SC	18.645	19.452	20.173	20.893	21.614	22.479
	24	TC	48.606	46.783	45.155	43.526	41.898	39.945
		SC	12.350	13.640	14.791	15.942	17.094	18.475

Model : M4RT200A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	52.734	49.956	47.475	44.995	42.514	39.537
		SC	50.472	48.170	46.114	44.059	42.004	39.537
	15	TC	54.178	51.649	49.391	47.133	44.875	42.165
		SC	48.017	46.164	44.509	42.855	41.201	39.215
	18	TC	58.114	56.265	54.615	52.964	51.314	49.334
		SC	41.320	40.692	40.132	39.571	39.011	38.338
	19.4	TC	59.950	58.419	57.053	55.686	54.319	52.679
		SC	38.195	38.139	38.089	38.039	37.989	37.929
	20	TC	60.738	59.088	57.616	56.143	54.671	52.904
		SC	36.856	36.746	36.649	36.551	36.453	36.336
	22	TC	63.361	61.318	59.493	57.669	55.844	53.654
		SC	32.392	32.104	31.847	31.590	31.333	31.025
	24	TC	65.985	63.547	61.371	59.194	57.017	54.405
		SC	27.928	27.462	27.046	26.630	26.214	25.714

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

Cooling Only (R407C)

Model : M4RT250A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	63.322	60.067	57.161	54.254	51.348	47.860
		SC	63.322	60.067	57.161	54.254	51.348	47.860
	15	TC	67.466	63.668	60.277	56.885	53.494	49.424
		SC	60.977	58.170	55.663	53.157	50.650	47.643
	18	TC	78.769	73.489	68.775	64.061	59.347	53.690
		SC	54.582	52.996	51.580	50.164	48.748	47.048
	19.4	TC	84.043	78.072	72.741	67.409	62.078	55.680
		SC	51.598	50.582	49.675	48.767	47.860	46.771
	20	TC	86.304	80.136	74.629	69.123	63.616	57.008
		SC	50.319	49.193	48.188	47.182	46.177	44.971
	22	TC	93.839	87.017	80.925	74.834	68.743	61.433
		SC	46.056	44.564	43.232	41.899	40.567	38.969
	24	TC	101.374	93.897	87.221	80.545	73.870	65.859
		SC	41.793	39.935	38.276	36.617	34.958	32.967

Model : M4RT300A

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	84.803	79.304	74.394	69.484	64.573	58.681
		SC	84.803	79.304	74.394	69.484	64.573	58.681
	15	TC	87.420	81.927	77.022	72.117	67.212	61.326
		SC	81.241	76.443	72.159	67.875	63.591	58.450
	18	TC	94.557	89.079	84.189	79.298	74.408	68.539
		SC	71.525	68.639	66.063	63.487	60.910	57.819
	19.4	TC	97.887	92.417	87.533	82.649	77.766	71.905
		SC	66.991	64.998	63.218	61.439	59.659	57.524
	20	TC	99.314	93.787	88.851	83.916	78.981	73.059
		SC	65.048	63.025	61.218	59.412	57.606	55.438
	22	TC	104.072	98.352	93.245	88.139	83.032	76.904
		SC	58.570	56.447	54.552	52.656	50.760	48.485
	24	TC	108.830	102.918	97.639	92.361	87.083	80.749
		SC	52.093	49.870	47.885	45.900	43.915	41.533

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

	M4RT060A	M4RT080A	M4RT100A	M4RT120A	M4RT150A	M4RT200A	M4RT250A	M4RT300A
Bypass Factor	0.47	0.45	0.51	0.40	0.40	0.42	0.46	0.38

Heatpump Model (R22)

Model : MRT080AR (Cooling Capacity)

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C						
			19.4	25	30	35	40	44	46
26.7	13.9	TC	19.484	18.887	18.354	17.820	17.287	16.860	16.647
		SC	19.484	18.887	18.354	17.820	17.287	16.860	16.647
	15	TC	21.468	20.563	19.754	18.946	18.137	17.490	17.167
		SC	18.617	18.222	17.870	17.518	17.166	16.884	16.743
	17.2	TC	25.437	23.914	22.555	21.196	19.837	18.750	18.206
		SC	16.883	16.894	16.904	16.914	16.924	16.932	16.936
	18	TC	26.880	25.133	23.574	22.014	20.455	19.208	18.584
		SC	16.252	16.411	16.552	16.694	16.836	16.949	17.006
	19.4	TC	29.405	27.266	25.356	23.447	21.537	20.009	19.245
		SC	15.148	15.565	15.937	16.309	16.682	16.979	17.128
	20	TC	30.487	28.221	26.198	24.174	22.151	20.532	19.723
		SC	14.675	15.024	15.336	15.647	15.959	16.208	16.332
	22	TC	34.095	31.404	29.002	26.600	24.198	22.276	21.315
		SC	13.099	13.221	13.330	13.439	13.548	13.635	13.679
	24	TC	37.702	34.588	31.807	29.026	26.245	24.020	22.907
		SC	11.522	11.417	11.324	11.231	11.137	11.063	11.025

Model : MRT100AR (Cooling Capacity)

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C						
			19.4	25	30	35	40	44	46
26.7	13.9	TC	28.042	26.520	25.160	23.800	22.441	21.353	20.809
		SC	28.042	26.520	25.160	23.800	22.441	21.353	20.809
	15	TC	28.179	27.003	25.952	24.902	23.851	23.011	22.591
		SC	27.030	25.845	24.787	23.730	22.672	21.825	21.402
	17.2	TC	28.453	27.969	27.537	27.105	26.673	26.328	26.155
		SC	25.006	24.497	24.042	23.588	23.134	22.770	22.589
	18	TC	28.552	28.320	28.113	27.906	27.699	27.534	27.451
		SC	24.269	24.006	23.772	23.537	23.302	23.114	23.020
	19.4	TC	28.726	28.935	29.122	29.308	29.495	29.644	29.719
		SC	22.981	23.148	23.297	23.447	23.596	23.715	23.775
	20	TC	28.801	28.964	29.110	29.256	29.402	29.519	29.577
		SC	22.429	22.495	22.553	22.612	22.671	22.718	22.741
	22	TC	29.050	29.062	29.072	29.083	29.093	29.102	29.106
		SC	20.589	20.316	20.073	19.830	19.587	19.393	19.296
	24	TC	29.298	29.159	29.034	28.909	28.784	28.684	28.634
		SC	18.748	18.138	17.593	17.048	16.504	16.068	15.850

Model : MRT150AR (Cooling Capacity)

Indoor DB ° C	Indoor WB ° C	Capacity kW	Outdoor DB, ° C						
			19.4	25	30	35	40	44	46
26.7	13.9	TC	42.995	40.515	38.300	36.086	33.871	32.099	31.213
		SC	40.437	38.495	36.762	35.028	33.294	31.907	31.213
	15	TC	43.804	41.599	39.630	37.661	35.692	34.117	33.329
		SC	38.040	36.855	35.797	34.738	33.680	32.833	32.410
	17.2	TC	45.421	43.766	42.289	40.812	39.334	38.152	37.562
		SC	33.246	33.574	33.867	34.159	34.452	34.686	34.803
	18	TC	46.009	44.555	43.256	41.957	40.659	39.620	39.101
		SC	31.503	32.381	33.165	33.949	34.733	35.360	35.673
	19.4	TC	47.038	45.934	44.948	43.962	42.977	42.188	41.794
		SC	28.452	30.293	31.937	33.580	35.224	36.539	37.196
	20	TC	47.479	46.314	45.274	44.233	43.193	42.361	41.945
		SC	27.145	28.863	30.397	31.931	33.465	34.692	35.306
	22	TC	48.949	47.581	46.359	45.137	43.915	42.937	42.448
		SC	22.786	24.095	25.264	26.432	27.601	28.536	29.003
	24	TC	50.420	48.847	47.444	46.040	44.636	43.513	42.951
		SC	18.428	19.327	20.130	20.934	21.737	22.379	22.700

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

Heatpump Model (R22)

Model : MRT200AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	19.4	25	30	35	40	44	46
26.7	13.9	TC	48.919	47.382	46.010	44.637	43.265	42.167	41.618
		SC	48.919	47.382	46.010	44.637	43.265	42.167	41.618
	15	TC	54.034	51.665	49.549	47.433	45.317	43.625	42.778
		SC	47.393	46.162	45.063	43.964	42.865	41.985	41.545
	17.2	TC	64.264	60.230	56.627	53.025	49.423	46.541	45.100
		SC	44.341	43.722	43.169	42.617	42.064	41.622	41.401
	18	TC	67.984	63.344	59.201	55.058	50.915	47.601	45.944
		SC	43.231	42.835	42.481	42.127	41.773	41.490	41.348
	19.4	TC	74.494	68.795	63.706	58.617	53.528	49.456	47.421
		SC	41.289	41.282	41.276	41.270	41.264	41.259	41.256
	20	TC	77.284	71.268	65.896	60.524	55.152	50.854	48.705
		SC	40.456	40.258	40.081	39.904	39.726	39.585	39.514
	22	TC	86.584	79.511	73.196	66.881	60.565	55.513	52.987
		SC	37.682	36.845	36.097	35.350	34.603	34.005	33.706
	24	TC	95.884	87.755	80.496	73.237	65.979	60.172	57.268
		SC	34.907	33.431	32.114	30.797	29.479	28.425	27.898

Model : MRT250AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	19.4	25	30	35	40	44	46
26.7	13.9	TC	67.956	63.945	60.363	56.781	53.199	50.334	48.901
		SC	67.956	63.945	60.363	56.781	53.199	50.334	48.901
	15	TC	72.546	67.755	63.477	59.200	54.922	51.500	49.789
		SC	65.791	62.153	58.904	55.656	52.407	49.808	48.509
	17.2	TC	81.725	75.375	69.706	64.037	58.368	53.833	51.565
		SC	61.462	58.570	55.987	53.405	50.823	48.757	47.725
	18	TC	85.063	78.146	71.971	65.796	59.621	54.681	52.211
		SC	59.887	57.266	54.927	52.587	50.247	48.375	47.439
	19.4	TC	90.904	82.996	75.935	68.875	61.814	56.165	53.341
		SC	57.132	54.986	53.070	51.155	49.239	47.706	46.940
	20	TC	93.407	85.355	78.166	70.977	63.788	58.036	55.161
		SC	55.951	53.714	51.718	49.721	47.724	46.127	45.328
	22	TC	101.752	93.220	85.602	77.984	70.367	64.273	61.226
		SC	52.015	49.476	47.209	44.942	42.675	40.861	39.954
	24	TC	110.096	101.084	93.038	84.992	76.946	70.509	67.290
		SC	48.078	45.237	42.700	40.162	37.625	35.595	34.581

Model : MRT300AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	19.4	25	30	35	40	44	46
26.7	13.9	TC	84.945	79.766	75.142	70.518	65.895	62.195	60.346
		SC	84.945	79.766	75.142	70.518	65.895	62.195	60.346
	15	TC	90.649	84.462	78.938	73.414	67.889	63.470	61.260
		SC	83.529	78.431	73.879	69.327	64.775	61.134	59.313
	17.2	TC	102.058	93.854	86.529	79.204	71.879	66.019	63.089
		SC	80.698	75.761	71.353	66.944	62.536	59.010	57.246
	18	TC	106.206	97.269	89.289	81.309	73.330	66.946	63.754
		SC	79.668	74.790	70.434	66.078	61.722	58.237	56.495
	19.4	TC	113.466	103.245	94.120	84.994	75.869	68.568	64.918
		SC	77.867	73.091	68.826	64.562	60.297	56.886	55.180
	20	TC	116.577	106.199	96.933	87.667	78.401	70.988	67.282
		SC	77.094	72.164	67.762	63.360	58.958	55.436	53.675
	22	TC	126.948	116.046	106.311	96.577	86.842	79.054	75.160
		SC	74.521	69.076	64.215	59.354	54.493	50.604	48.660
	24	TC	137.320	125.892	115.689	105.486	95.283	87.121	83.039
		SC	71.947	65.988	60.668	55.348	50.028	45.772	43.644

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

	MRT080AR	MRT100AR	MRT150AR	MRT200AR	MRT250AR	MRT300AR
Bypass Factor	0.49	0.40	0.64	0.46	0.43	0.40

Heatpump Model (R22)

Model : M4RT080AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	17.536	16.998	16.518	16.038	15.558	15.174
		SC	17.536	16.998	16.518	16.038	15.558	15.174
	15	TC	19.321	18.506	17.779	17.051	16.323	15.741
		SC	16.755	16.400	16.083	15.766	15.449	15.196
	18	TC	24.192	22.620	21.216	19.813	18.410	17.287
		SC	14.627	14.770	14.897	15.025	15.152	15.254
	19.4	TC	26.464	24.539	22.821	21.102	19.383	18.008
		SC	13.633	14.009	14.344	14.679	15.014	15.282
	20	TC	27.438	25.399	23.578	21.757	19.936	18.479
		SC	13.208	13.522	13.802	14.082	14.363	14.587
	22	TC	30.685	28.264	26.102	23.940	21.778	20.048
		SC	11.789	11.899	11.997	12.095	12.193	12.272
	24	TC	33.932	31.129	28.626	26.123	23.620	21.618
		SC	10.370	10.276	10.192	10.108	10.024	9.956

Model : M4RT100AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	24.677	23.337	22.141	20.944	19.748	18.790
		SC	24.677	23.337	22.141	20.944	19.748	18.790
	15	TC	24.798	23.762	22.838	21.914	20.989	20.250
		SC	23.787	22.744	21.813	20.882	19.951	19.206
	18	TC	25.126	24.922	24.740	24.558	24.375	24.230
		SC	21.357	21.126	20.919	20.712	20.506	20.340
	19.4	TC	25.279	25.463	25.627	25.791	25.955	26.087
		SC	20.223	20.370	20.502	20.633	20.764	20.869
	20	TC	25.345	25.489	25.617	25.745	25.874	25.977
		SC	19.738	19.795	19.847	19.899	19.950	19.992
	22	TC	25.564	25.574	25.583	25.593	25.602	25.609
		SC	18.118	17.878	17.664	17.451	17.237	17.066
	24	TC	25.783	25.660	25.550	25.440	25.330	25.242
		SC	16.498	15.961	15.482	15.003	14.523	14.140

Model : M4RT150AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	42.565	40.110	37.917	35.725	33.532	31.778
		SC	40.033	38.111	36.394	34.678	32.961	31.588
	15	TC	43.366	41.183	39.234	37.284	35.335	33.776
		SC	37.660	36.486	35.439	34.391	33.343	32.505
	18	TC	45.549	44.109	42.824	41.538	40.252	39.224
		SC	31.188	32.057	32.833	33.609	34.385	35.006
	19.4	TC	46.568	45.475	44.499	43.523	42.547	41.766
		SC	28.168	29.990	31.617	33.245	34.872	36.174
	20	TC	47.005	45.851	44.821	43.791	42.761	41.937
		SC	26.873	28.574	30.093	31.611	33.130	34.345
	22	TC	48.460	47.105	45.895	44.685	43.475	42.507
		SC	22.558	23.854	25.011	26.168	27.325	28.250
	24	TC	49.915	48.359	46.969	45.579	44.190	43.078
		SC	18.244	19.134	19.929	20.724	21.519	22.155

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

Heatpump Model (R22)

Model : M4RT200AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	46.473	45.013	43.709	42.405	41.102	40.058
		SC	46.473	45.013	43.709	42.405	41.102	40.058
	15	TC	51.333	49.081	47.071	45.061	43.051	41.444
		SC	45.024	43.854	42.810	41.766	40.721	39.886
	18	TC	64.585	60.177	56.241	52.305	48.370	45.221
		SC	41.070	40.693	40.357	40.021	39.684	39.415
	19.4	TC	70.770	65.355	60.520	55.686	50.851	46.984
		SC	39.224	39.218	39.212	39.206	39.200	39.196
	20	TC	73.420	67.704	62.601	57.498	52.394	48.311
		SC	38.434	38.245	38.077	37.908	37.740	37.605
	22	TC	82.255	75.536	69.536	63.537	57.537	52.737
		SC	35.797	35.002	34.292	33.583	32.873	32.305
	24	TC	91.090	83.367	76.471	69.576	62.680	57.163
		SC	33.161	31.760	30.508	29.257	28.005	27.004

Model : M4RT250AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	66.597	62.666	59.156	55.645	52.135	49.327
		SC	66.597	62.666	59.156	55.645	52.135	49.327
	15	TC	71.095	66.400	62.208	58.016	53.824	50.470
		SC	64.476	60.910	57.726	54.543	51.359	48.812
	18	TC	83.361	76.584	70.532	64.480	58.429	53.587
		SC	58.689	56.121	53.828	51.535	49.242	47.408
	19.4	TC	89.086	81.336	74.416	67.497	60.578	55.042
		SC	55.989	53.886	52.009	50.132	48.254	46.752
	20	TC	91.539	83.648	76.603	69.557	62.512	56.876
		SC	54.832	52.640	50.683	48.727	46.770	45.204
	22	TC	99.717	91.355	83.890	76.425	68.959	62.987
		SC	50.974	48.486	46.265	44.043	41.821	40.044
	24	TC	107.894	99.063	91.178	83.292	75.407	69.099
		SC	47.117	44.332	41.846	39.359	36.873	34.884

Model : M4RT300AR (Cooling Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C					
° C	° C	kW	19.4	25	30	35	40	46
26.7	13.9	TC	83.246	78.171	73.639	69.108	64.577	60.951
		SC	83.246	78.171	73.639	69.108	64.577	60.951
	15	TC	88.836	82.773	77.359	71.945	66.532	62.201
		SC	81.859	76.862	72.402	67.941	63.480	59.911
	18	TC	104.082	95.323	87.503	79.683	71.863	65.607
		SC	78.075	73.294	69.025	64.756	60.488	57.073
	19.4	TC	111.197	101.180	92.237	83.294	74.351	67.197
		SC	76.309	71.629	67.450	63.271	59.092	55.748
	20	TC	114.246	104.075	94.994	85.914	76.833	69.568
		SC	75.553	70.721	66.407	62.093	57.779	54.328
	22	TC	124.409	113.725	104.185	94.645	85.105	77.473
		SC	73.030	67.695	62.931	58.167	53.403	49.592
	24	TC	134.573	123.374	113.375	103.376	93.377	85.378
		SC	70.508	64.668	59.455	54.241	49.027	44.856

All the data above are based on 26.7°C entering DB. To obtain data for different entering DB, please use the formula below :

Sensible capacity (@EDB) (kW) = Sensible capacity (@26.7) + 1.23 x L/s x (1 - BPF) (EDB - 26.7) / 1000

Where, EDB = Entering dry bulb temperature, °C

	M4RT080AR	M4RT100AR	M4RT150AR	M4RT200AR	M4RT250AR	M4RT300AR
Bypass Factor	0.49	0.41	0.64	0.46	0.43	0.40

Heatpump Model (R22)

Model : MRT080AR (Heating Capacity)

Outdoor WB°C	Capacity kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-11.0	TC	12.672	12.558	12.444	12.330	12.159	12.005
	SC	12.672	12.558	12.444	12.330	12.159	12.005
-9.0	TC	13.731	13.601	13.470	13.339	13.166	13.009
	SC	13.731	13.601	13.470	13.339	13.166	13.009
-5.0	TC	15.849	15.707	15.565	15.423	15.210	15.018
	SC	15.849	15.707	15.565	15.423	15.210	15.018
6.0	TC	21.674	22.128	22.582	23.036	21.723	20.542
	SC	21.674	22.128	22.582	23.036	21.723	20.542
12.0	TC	24.852	24.630	24.408	24.187	23.854	23.555
	SC	24.852	24.630	24.408	24.187	23.854	23.555
15.0	TC	26.440	26.205	25.969	25.733	25.379	25.061
	SC	26.440	26.205	25.969	25.733	25.379	25.061
18.3	TC	28.188	27.937	27.685	27.434	27.057	26.718
	SC	28.188	27.937	27.685	27.434	27.057	26.718

FROST REGION

Model : MRT100AR (Heating Capacity)

Outdoor WB°C	Capacity kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-11.0	TC	15.314	15.176	15.038	14.900	14.694	14.508
	SC	15.314	15.176	15.038	14.900	14.694	14.508
-9.0	TC	16.866	16.617	16.369	16.120	16.046	15.980
	SC	16.866	16.617	16.369	16.120	16.046	15.980
-5.0	TC	19.972	19.793	19.614	19.435	19.167	18.925
	SC	19.972	19.793	19.614	19.435	19.167	18.925
6.0	TC	28.513	29.266	30.020	30.774	28.800	27.023
	SC	28.513	29.266	30.020	30.774	28.800	27.023
12.0	TC	33.171	32.875	32.580	32.284	31.840	31.440
	SC	33.171	32.875	32.580	32.284	31.840	31.440
15.0	TC	35.501	35.184	34.868	34.551	34.076	33.649
	SC	35.501	35.184	34.868	34.551	34.076	33.649
18.3	TC	38.063	37.724	37.384	37.045	36.536	36.079
	SC	38.063	37.724	37.384	37.045	36.536	36.079

FROST REGION

Model : MRT150AR (Heating Capacity)

Outdoor WB°C	Capacity kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-11.0	TC	30.070	29.800	29.529	29.259	28.853	28.488
	SC	30.070	29.800	29.529	29.259	28.853	28.488
-9.0	TC	31.943	31.847	31.750	31.653	30.922	30.264
	SC	31.943	31.847	31.750	31.653	30.922	30.264
-5.0	TC	35.690	35.370	35.050	34.729	34.249	33.817
	SC	35.690	35.370	35.050	34.729	34.249	33.817
6.0	TC	45.992	45.804	45.616	45.428	44.460	43.588
	SC	45.992	45.804	45.616	45.428	44.460	43.588
12.0	TC	51.611	51.151	50.690	50.230	49.539	48.917
	SC	51.611	51.151	50.690	50.230	49.539	48.917
15.0	TC	54.421	53.936	53.451	52.965	52.237	51.582
	SC	54.421	53.936	53.451	52.965	52.237	51.582
18.3	TC	57.512	56.999	56.487	55.974	55.205	54.513
	SC	57.512	56.999	56.487	55.974	55.205	54.513

FROST REGION

Heatpump Model (R22)

Model : MRT200AR (Heating Capacity)

Outdoor WB°C	Capacity kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-11.0	TC	32.966	32.669	32.373	32.076	31.631	31.231
	SC	32.966	32.669	32.373	32.076	31.631	31.231
-9.0	TC	36.590	35.960	35.331	34.701	34.683	34.667
	SC	36.590	35.960	35.331	34.701	34.683	34.667
-5.0	TC	43.837	43.444	43.051	42.658	42.069	41.538
	SC	43.837	43.444	43.051	42.658	42.069	41.538
6.0	TC	63.766	62.831	61.896	60.961	60.684	60.435
	SC	63.766	62.831	61.896	60.961	60.684	60.435
12.0	TC	74.637	73.971	73.305	72.640	71.641	70.742
	SC	74.637	73.971	73.305	72.640	71.641	70.742
15.0	TC	80.072	79.358	78.644	77.931	76.860	75.896
	SC	80.072	79.358	78.644	77.931	76.860	75.896
18.3	TC	86.051	85.284	84.517	83.751	82.600	81.565
	SC	86.051	85.284	84.517	83.751	82.600	81.565

FROST REGION

Model : MRT250AR (Heating Capacity)

Outdoor WB°C	Capacity kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-11.0	TC	40.233	39.871	39.509	39.147	38.604	38.115
	SC	40.233	39.871	39.509	39.147	38.604	38.115
-9.0	TC	43.502	43.118	42.734	42.351	41.753	41.215
	SC	43.502	43.118	42.734	42.351	41.753	41.215
-5.0	TC	50.040	49.591	49.142	48.694	48.021	47.415
	SC	50.040	49.591	49.142	48.694	48.021	47.415
6.0	TC	68.019	69.965	71.911	73.857	68.914	64.464
	SC	68.019	69.965	71.911	73.857	68.914	64.464
12.0	TC	77.826	77.131	76.437	75.743	74.701	73.764
	SC	77.826	77.131	76.437	75.743	74.701	73.764
15.0	TC	82.729	81.991	81.254	80.516	79.410	78.414
	SC	82.729	81.991	81.254	80.516	79.410	78.414
18.3	TC	88.123	87.337	86.552	85.767	84.589	83.529
	SC	88.123	87.337	86.552	85.767	84.589	83.529

FROST REGION

Model : MRT300AR (Heating Capacity)

Outdoor WB°C	Capacity kW	Indoor DB°C					
		15.0	17.0	19.0	21.0	24.0	26.7
-11.0	TC	48.029	47.597	47.165	46.733	46.085	45.501
	SC	48.029	47.597	47.165	46.733	46.085	45.501
-9.0	TC	52.834	52.075	51.316	50.557	50.294	50.057
	SC	52.834	52.075	51.316	50.557	50.294	50.057
-5.0	TC	62.445	61.885	61.325	60.765	59.926	59.170
	SC	62.445	61.885	61.325	60.765	59.926	59.170
6.0	TC	88.873	88.068	87.264	86.460	85.286	84.230
	SC	88.873	88.068	87.264	86.460	85.286	84.230
12.0	TC	103.288	102.367	101.446	100.524	99.142	97.899
	SC	103.288	102.367	101.446	100.524	99.142	97.899
15.0	TC	110.496	109.511	108.526	107.541	106.063	104.733
	SC	110.496	109.511	108.526	107.541	106.063	104.733
18.3	TC	118.425	117.369	116.314	115.259	113.676	112.251
	SC	118.425	117.369	116.314	115.259	113.676	112.251

FROST REGION

Heatpump Model (R407C)

Model : M4RT080AR (Heating Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	-11.0°C	-9.0°C	-5.0°C	6.0°C	12.0°C	15.0°C	18.3°C
26.7	15.0°C	TC	12.414	13.452	15.527	21.233	24.346	25.902	27.614
		SC	12.414	13.452	15.527	21.233	24.346	25.902	27.614
	17.0°C	TC	12.302	13.324	15.388	21.678	24.129	25.671	27.368
		SC	12.302	13.324	15.388	21.678	24.129	25.671	27.368
	19.0°C	TC	12.191	13.196	15.248	22.123	23.911	25.440	27.122
		SC	12.191	13.196	15.248	22.123	23.911	25.440	27.122
	21.0°C	TC	12.079	13.068	15.109	22.567	23.694	25.209	26.876
		SC	12.079	13.068	15.109	22.567	23.694	25.209	26.876
	24.0°C	TC	11.912	12.898	14.900	21.281	23.368	24.863	26.507
		SC	11.912	12.898	14.900	21.281	23.368	24.863	26.507
	26.7°C	TC	11.761	12.745	14.712	20.124	23.075	24.551	26.174
		SC	11.761	12.745	14.712	20.124	23.075	24.551	26.174

FROST REGION

Model : M4RT100AR (Heating Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	-11.0°C	-9.0°C	-5.0°C	6.0°C	12.0°C	15.0°C	18.3°C
26.7	15.0°C	TC	14.876	16.385	19.402	27.698	32.224	34.486	36.975
		SC	14.876	16.385	19.402	27.698	32.224	34.486	36.975
	17.0°C	TC	14.742	16.143	19.228	28.430	31.936	34.179	36.646
		SC	14.742	16.143	19.228	28.430	31.936	34.179	36.646
	19.0°C	TC	14.608	15.901	19.054	29.162	31.649	33.871	36.316
		SC	14.608	15.901	19.054	29.162	31.649	33.871	36.316
	21.0°C	TC	14.475	15.659	18.880	29.894	31.361	33.564	35.987
		SC	14.475	15.659	18.880	29.894	31.361	33.564	35.987
	24.0°C	TC	14.274	15.588	18.619	27.977	30.930	33.103	35.493
		SC	14.274	15.588	18.619	27.977	30.930	33.103	35.493
	26.7°C	TC	14.093	15.523	18.384	26.251	30.542	32.688	35.048
		SC	14.093	15.523	18.384	26.251	30.542	32.688	35.048

FROST REGION

Model : M4RT150AR (Heating Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	-11.0°C	-9.0°C	-5.0°C	6.0°C	12.0°C	15.0°C	18.3°C
26.7	15.0°C	TC	31.040	32.974	36.841	47.476	53.276	56.177	59.367
		SC	31.040	32.974	36.841	47.476	53.276	56.177	59.367
	17.0°C	TC	30.761	32.874	36.511	47.281	52.801	55.676	58.838
		SC	30.761	32.874	36.511	47.281	52.801	55.676	58.838
	19.0°C	TC	30.482	32.774	36.180	47.087	52.326	55.175	58.309
		SC	30.482	32.774	36.180	47.087	52.326	55.175	58.309
	21.0°C	TC	30.203	32.674	35.850	46.893	51.850	54.674	57.780
		SC	30.203	32.674	35.850	46.893	51.850	54.674	57.780
	24.0°C	TC	29.784	31.920	35.354	45.894	51.137	53.922	56.986
		SC	29.784	31.920	35.354	45.894	51.137	53.922	56.986
	26.7°C	TC	29.407	31.240	34.908	44.994	50.495	53.246	56.272
		SC	29.407	31.240	34.908	44.994	50.495	53.246	56.272

FROST REGION

Heatpump Model (R407C)

Model : M4RT200AR (Heating Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	-11.0°C	-9.0°C	-5.0°C	6.0°C	12.0°C	15.0°C	18.3°C
26.7	15.0°C	TC	36.453	40.460	48.473	70.511	82.531	88.541	95.153
		SC	36.453	40.460	48.473	70.511	82.531	88.541	95.153
	17.0°C	TC	36.125	39.764	48.039	69.477	81.795	87.752	94.305
		SC	36.125	39.764	48.039	69.477	81.795	87.752	94.305
	19.0°C	TC	35.797	39.067	47.604	68.443	81.059	86.963	93.457
		SC	35.797	39.067	47.604	68.443	81.059	86.963	93.457
	21.0°C	TC	35.469	38.371	47.170	67.409	80.323	86.173	92.609
		SC	35.469	38.371	47.170	67.409	80.323	86.173	92.609
	24.0°C	TC	34.977	38.351	46.518	67.103	79.219	84.989	91.337
		SC	34.977	38.351	46.518	67.103	79.219	84.989	91.337
	26.7°C	TC	34.534	38.333	45.932	66.827	78.225	83.924	90.192
		SC	34.534	38.333	45.932	66.827	78.225	83.924	90.192
			FROST REGION						

Model : M4RT250AR (Heating Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	-11.0°C	-9.0°C	-5.0°C	6.0°C	12.0°C	15.0°C	18.3°C
26.7	15.0°C	TC	40.712	44.020	50.635	68.829	78.752	83.714	89.172
		SC	40.712	44.020	50.635	68.829	78.752	83.714	89.172
	17.0°C	TC	40.346	43.631	50.181	70.798	78.050	82.968	88.377
		SC	40.346	43.631	50.181	70.798	78.050	82.968	88.377
	19.0°C	TC	39.979	43.243	49.727	72.767	77.347	82.221	87.583
		SC	39.979	43.243	49.727	72.767	77.347	82.221	87.583
	21.0°C	TC	39.613	42.855	49.273	74.736	76.645	81.475	86.788
		SC	39.613	42.855	49.273	74.736	76.645	81.475	86.788
	24.0°C	TC	39.064	42.250	48.592	69.734	75.591	80.355	85.596
		SC	39.064	42.250	48.592	69.734	75.591	80.355	85.596
	26.7°C	TC	38.569	41.706	47.980	65.232	74.642	79.347	84.523
		SC	38.569	41.706	47.980	65.232	74.642	79.347	84.523
			FROST REGION						

Model : M4RT300AR (Heating Capacity)

Indoor DB	Indoor WB	Capacity	Outdoor DB, ° C						
° C	° C	kW	-11.0°C	-9.0°C	-5.0°C	6.0°C	12.0°C	15.0°C	18.3°C
26.7	15.0°C	TC	51.285	56.416	66.678	94.898	110.291	117.987	126.453
		SC	51.285	56.416	66.678	94.898	110.291	117.987	126.453
	17.0°C	TC	50.824	55.606	66.080	94.039	109.307	116.935	125.327
		SC	50.824	55.606	66.080	94.039	109.307	116.935	125.327
	19.0°C	TC	50.362	54.795	65.483	93.180	108.323	115.884	124.200
		SC	50.362	54.795	65.483	93.180	108.323	115.884	124.200
	21.0°C	TC	49.901	53.984	64.885	92.321	107.340	114.832	123.073
		SC	49.901	53.984	64.885	92.321	107.340	114.832	123.073
	24.0°C	TC	49.209	53.704	63.988	91.068	105.864	113.254	121.382
		SC	49.209	53.704	63.988	91.068	105.864	113.254	121.382
	26.7°C	TC	48.586	53.451	63.182	89.940	104.536	111.834	119.861
		SC	48.586	53.451	63.182	89.940	104.536	111.834	119.861
			FROST REGION						

Electrical Data

Power Input Table

Cooling Only (R22)

Model: MRT060A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	4,050	4,520	4,940	5,360	5,779	6,283	6,619	6,787	6,955
15	4,128	4,599	5,019	5,439	5,859	6,363	6,699	6,867	7,035
16.7	4,249	4,720	5,140	5,561	5,981	6,485	6,821	6,990	7,158
18	4,342	4,813	5,233	5,654	6,074	6,579	6,915	7,084	7,252
19.4	4,441	4,861	5,235	5,610	6,096	6,680	7,069	7,264	7,458
20	4,484	4,952	5,371	5,789	6,207	6,709	7,043	7,211	7,378
22	4,626	5,085	5,494	5,904	6,313	6,805	7,132	7,296	7,460
22.2	4,640	5,098	5,507	5,915	6,324	6,814	7,141	7,304	7,468
24	4,769	5,217	5,618	6,019	6,419	6,900	7,221	7,381	7,541

All power in watts

Model : MRT080A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	5,790	6,481	7,098	7,715	8,332	9,072	9,566	9,812	10,059
15	5,909	6,661	7,332	8,003	8,674	9,480	10,016	10,285	10,553
16.7	6,094	6,939	7,694	8,449	9,204	10,110	10,713	11,015	11,317
18	6,235	7,152	7,971	8,790	9,609	10,591	11,246	11,574	11,902
19.4	6,386	7,001	7,551	8,100	9,468	11,110	12,205	12,752	13,299
20	6,451	7,401	8,248	9,096	9,943	10,960	11,638	11,977	12,316
22	6,668	7,467	8,180	8,893	9,606	10,462	11,032	11,317	11,603
22.2	6,690	7,473	8,173	8,873	9,572	10,412	10,972	11,251	11,531
24	6,885	7,533	8,112	8,690	9,269	9,963	10,426	10,657	10,889

All power in watts

Model : MRT100A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	8,420	9,123	9,751	10,379	11,007	11,760	12,262	12,513	12,765
15	8,475	9,290	10,018	10,745	11,473	12,346	12,928	13,219	13,510
16.7	8,560	9,548	10,430	11,311	12,193	13,252	13,957	14,310	14,663
18	8,625	9,745	10,745	11,745	12,744	13,944	14,744	15,144	15,544
19.4	8,695	9,343	9,921	10,500	12,405	14,690	16,214	16,975	17,737
20	8,725	9,932	11,010	12,087	13,165	14,458	15,321	15,752	16,183
22	8,825	9,849	10,762	11,676	12,590	13,687	14,418	14,783	15,149
22.2	8,835	9,840	10,738	11,635	12,533	13,610	14,328	14,687	15,046
24	8,925	9,765	10,515	11,265	12,015	12,915	13,515	13,815	14,115

All power in watts

Model: MRT120A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	8,500	9,436	10,272	11,108	11,944	12,947	13,616	13,950	14,285
15	8,644	9,562	10,381	11,200	12,019	13,002	13,657	13,985	14,312
16.7	8,868	9,756	10,549	11,342	12,135	13,086	13,720	14,038	14,355
18	9,038	9,904	10,677	11,450	12,223	13,151	13,769	14,078	14,387
19.4	9,222	10,061	10,811	11,560	12,315	13,220	13,824	14,125	14,427
20	9,301	10,153	10,915	11,676	12,437	13,350	13,959	14,264	14,568
22	9,563	10,452	11,246	12,039	12,832	13,785	14,419	14,737	15,054
22.2	9,590	10,482	11,279	12,075	12,872	13,828	14,465	14,784	15,103
24	9,826	10,751	11,577	12,402	13,228	14,219	14,879	15,210	15,540

All power in watts

Model: MRT150A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	11,580	12,820	13,928	15,035	16,143	17,472	18,358	18,801	19,244
15	11,763	13,119	14,330	15,540	16,751	18,204	19,172	19,656	20,141
16.7	12,046	13,580	14,950	16,320	17,690	19,334	20,430	20,978	21,526
18	12,262	13,933	15,425	16,917	18,409	20,199	21,392	21,989	22,586
19.4	12,495	13,610	14,605	15,600	18,114	21,130	23,141	24,146	25,152
20	12,595	14,338	15,895	17,452	19,009	20,877	22,122	22,745	23,368
22	12,927	14,423	15,759	17,094	18,430	20,032	21,101	21,635	22,169
22.2	12,961	14,432	15,745	17,058	18,372	19,948	20,999	21,524	22,049
24	13,260	14,508	15,622	16,737	17,851	19,188	20,079	20,525	20,971

All power in watts

Model : MRT200A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	16,960	18,270	19,440	20,610	21,780	23,184	24,120	24,588	25,056
15	17,029	18,578	19,961	21,343	22,726	24,385	25,491	26,044	26,598
16.7	17,136	19,053	20,765	22,476	24,188	26,242	27,611	28,295	28,980
18	17,218	19,416	21,379	23,342	25,306	27,661	29,232	30,017	30,802
19.4	17,306	18,524	19,612	20,700	24,559	29,190	32,277	33,821	35,365
20	17,344	19,735	21,870	24,006	26,141	28,704	30,412	31,266	32,120
22	17,469	19,493	21,300	23,107	24,914	27,082	28,528	29,251	29,973
22.2	17,482	19,469	21,243	23,017	24,791	26,920	28,339	29,049	29,759
24	17,595	19,251	20,730	22,208	23,687	25,461	26,644	27,235	27,827

All power in watts

Model : MRT250A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	22,460	24,230	25,810	27,391	28,971	30,867	32,131	32,764	33,396
15	22,565	24,359	25,961	27,562	29,164	31,086	32,367	33,008	33,648
16.7	22,728	24,558	26,193	27,828	29,462	31,424	32,731	33,385	34,039
18	22,852	24,711	26,371	28,030	29,690	31,682	33,010	33,673	34,337
19.4	22,986	24,628	26,094	27,560	29,560	31,960	33,560	34,360	35,160
20	23,043	24,974	26,697	28,421	30,145	32,213	33,592	34,281	34,971
22	23,235	25,302	27,148	28,994	30,841	33,056	34,533	35,271	36,010
22.2	23,254	25,335	27,193	29,052	30,910	33,140	34,627	35,370	36,113
24	23,426	25,631	27,599	29,568	31,537	33,899	35,474	36,261	37,049

All power in watts

Model : MRT300A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	28,460	30,947	33,168	35,389	37,610	40,275	42,052	42,940	43,829
15	28,689	31,220	33,480	35,740	38,000	40,712	42,520	43,424	44,328
16.7	29,044	31,642	33,963	36,283	38,603	41,387	43,244	44,172	45,100
18	29,315	31,965	34,332	36,698	39,064	41,904	43,797	44,743	45,690
19.4	29,607	31,887	33,924	35,960	38,915	42,460	44,824	46,005	47,187
20	29,732	32,460	34,896	37,332	39,768	42,691	44,640	45,614	46,588
22	30,149	32,951	35,454	37,956	40,458	43,461	45,463	46,464	47,464
22.2	30,191	33,001	35,509	38,018	40,527	43,538	45,545	46,549	47,552
24	30,566	33,443	36,011	38,580	41,149	44,231	46,286	47,313	48,341

All power in watts

Cooling Only (R407C)

Model: M4RT060A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	4,250	4,744	5,185	5,626	6,067	6,597	6,950	7,126	7,303
15	4,332	4,827	5,268	5,709	6,150	6,679	7,032	7,209	7,385
16.7	4,460	4,954	5,395	5,836	6,278	6,807	7,160	7,337	7,513
18	4,557	5,051	5,493	5,934	6,375	6,905	7,258	7,434	7,611
19.4	4,662	5,103	5,496	5,890	6,399	7,010	7,417	7,621	7,825
20	4,707	5,198	5,637	6,076	6,514	7,041	7,392	7,567	7,742
22	4,857	5,338	5,768	6,197	6,627	7,143	7,486	7,658	7,830
22.2	4,872	5,352	5,781	6,210	6,638	7,153	7,496	7,667	7,839
24	5,007	5,478	5,898	6,319	6,740	7,245	7,581	7,750	7,918

All power in watts

Model: M4RT080A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	6,770	7,396	7,955	8,514	9,073	9,744	10,191	10,415	10,638
15	6,838	7,480	8,054	8,627	9,201	9,889	10,348	10,577	10,807
16.7	6,943	7,611	8,207	8,803	9,398	10,114	10,590	10,829	11,067
18	7,024	7,710	8,323	8,936	9,550	10,285	10,776	11,021	11,266
19.4	7,110	7,681	8,190	8,700	9,505	10,470	11,114	11,435	11,757
20	7,147	7,853	8,483	9,114	9,744	10,500	11,004	11,256	11,508
22	7,271	7,972	8,598	9,224	9,850	10,601	11,101	11,352	11,602
22.2	7,284	7,984	8,609	9,235	9,860	10,611	11,111	11,361	11,611
24	7,395	8,091	8,712	9,334	9,955	10,701	11,198	11,447	11,695

All power in watts

Model: M4RT100A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	8,970	9,817	10,573	11,329	12,085	12,992	13,597	13,899	14,202
15	9,067	9,934	10,709	11,484	12,258	13,188	13,807	14,117	14,427
16.7	9,217	10,116	10,920	11,723	12,526	13,490	14,132	14,454	14,775
18	9,331	10,255	11,081	11,906	12,731	13,721	14,381	14,711	15,041
19.4	9,455	10,225	10,912	11,600	12,677	13,970	14,832	15,263	15,694
20	9,508	10,455	11,301	12,147	12,994	14,009	14,686	15,024	15,363
22	9,684	10,622	11,459	12,296	13,134	14,138	14,808	15,143	15,478
22.2	9,701	10,638	11,475	12,311	13,148	14,151	14,821	15,155	15,490
24	9,860	10,788	11,617	12,445	13,274	14,268	14,931	15,262	15,594

All power in watts

Model: M4RT120A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	8,930	9,922	10,808	11,693	12,579	13,642	14,350	14,704	15,059
15	9,085	10,054	10,919	11,784	12,649	13,687	14,379	14,725	15,071
16.7	9,324	10,258	11,091	11,925	12,758	13,758	14,425	14,758	15,091
18	9,508	10,414	11,223	12,032	12,841	13,812	14,459	14,783	15,106
19.4	9,705	10,593	11,387	12,180	12,948	13,870	14,485	14,792	15,099
20	9,789	10,679	11,473	12,268	13,062	14,015	14,650	14,968	15,286
22	10,071	11,003	11,835	12,667	13,500	14,498	15,164	15,497	15,830
22.2	10,099	11,036	11,872	12,707	13,543	14,547	15,215	15,550	15,884
24	10,353	11,327	12,197	13,067	13,937	14,981	15,677	16,025	16,373

All power in watts

Model: M4RT150A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	13,280	14,540	15,665	16,789	17,914	19,264	20,164	20,614	21,064
15	13,426	14,719	15,873	17,028	18,182	19,567	20,491	20,952	21,414
16.7	13,651	14,996	16,196	17,396	18,596	20,036	20,996	21,476	21,956
18	13,824	15,207	16,442	17,677	18,912	20,394	21,382	21,876	22,370
19.4	14,010	15,155	16,177	17,200	18,827	20,780	22,082	22,733	23,384
20	14,089	15,508	16,775	18,042	19,309	20,829	21,843	22,349	22,856
22	14,355	15,752	17,000	18,248	19,495	20,993	21,991	22,490	22,989
22.2	14,381	15,776	17,022	18,268	19,514	21,009	22,006	22,504	23,002
24	14,620	15,996	17,225	18,453	19,682	21,156	22,139	22,630	23,122

All power in watts

Model: M4RT200A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	19,280	21,139	22,800	24,460	26,120	28,112	29,440	30,104	30,768
15	19,504	21,382	23,059	24,736	26,413	28,426	29,767	30,438	31,109
16.7	19,850	21,757	23,460	25,163	26,867	28,910	30,273	30,954	31,635
18	20,114	22,044	23,767	25,490	27,213	29,281	30,659	31,349	32,038
19.4	20,399	22,087	23,593	25,100	27,182	29,680	31,345	32,178	33,011
20	20,521	22,482	24,233	25,984	27,735	29,836	31,236	31,937	32,637
22	20,928	22,913	24,684	26,456	28,228	30,354	31,772	32,481	33,189
22.2	20,969	22,956	24,730	26,503	28,277	30,406	31,825	32,535	33,244
24	21,335	23,343	25,136	26,929	28,722	30,873	32,307	33,024	33,742

All power in watts

Model: M4RT250A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	23,520	25,336	26,957	28,578	30,199	32,144	33,441	34,089	34,738
15	23,615	25,436	27,061	28,687	30,313	32,263	33,564	34,214	34,864
16.7	23,763	25,591	27,223	28,856	30,488	32,447	33,753	34,406	35,059
18	23,875	25,710	27,347	28,985	30,623	32,588	33,899	34,554	35,209
19.4	23,996	25,685	27,192	28,700	30,536	32,740	34,209	34,944	35,678
20	24,048	25,949	27,645	29,342	31,038	33,074	34,431	35,110	35,789
22	24,222	26,320	28,193	30,066	31,940	34,188	35,686	36,435	37,185
22.2	24,239	26,357	28,248	30,139	32,030	34,299	35,812	36,568	37,324
24	24,395	26,691	28,741	30,791	32,841	35,301	36,941	37,761	38,581

All power in watts

Model: M4RT300A

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	31,140	34,054	36,655	39,256	41,858	44,979	47,060	48,101	49,141
15	31,466	34,414	37,046	39,677	42,309	45,467	47,573	48,625	49,678
16.7	31,971	34,971	37,650	40,328	43,007	46,222	48,365	49,436	50,508
18	32,356	35,397	38,111	40,826	43,541	46,799	48,971	50,056	51,142
19.4	32,771	35,424	37,792	40,160	43,460	47,420	50,060	51,380	52,700
20	32,949	36,050	38,819	41,587	44,356	47,678	49,893	51,000	52,107
22	33,543	36,699	39,518	42,337	45,155	48,537	50,792	51,920	53,047
22.2	33,602	36,764	39,588	42,411	45,235	48,623	50,882	52,012	53,141
24	34,136	37,349	40,217	43,086	45,955	49,397	51,692	52,839	53,987

All power in watts

Heatpump Model (R22)

Cooling Capacity

Model: MRT080AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	7,530	8,161	8,725	9,288	9,852	10,528	10,979	11,204	11,430
15	7,580	8,264	8,874	9,485	10,095	10,828	11,316	11,560	11,805
16.7	7,658	8,422	9,106	9,789	10,472	11,291	11,838	12,111	12,384
18	7,717	8,544	9,282	10,021	10,759	11,645	12,236	12,532	12,827
19.4	7,780	8,362	8,881	9,400	10,594	12,027	12,982	13,460	13,938
20	7,808	8,683	9,465	10,247	11,028	11,966	12,592	12,904	13,217
22	7,899	8,713	9,439	10,166	10,892	11,764	12,345	12,636	12,927
22.2	7,908	8,716	9,437	10,158	10,879	11,744	12,321	12,609	12,898
24	7,990	8,742	9,413	10,085	10,756	11,562	12,099	12,368	12,636

All power in watts

Model: MRT100AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	9,870	10,596	11,244	11,891	12,539	13,317	13,835	14,094	14,353
15	9,896	10,672	11,364	12,057	12,750	13,581	14,136	14,413	14,690
16.7	9,936	10,789	11,551	12,314	13,076	13,990	14,600	14,905	15,210
18	9,966	10,879	11,694	12,510	13,325	14,303	14,955	15,281	15,608
19.4	9,999	10,678	11,284	11,890	13,140	14,640	15,640	16,140	16,640
20	10,013	10,987	11,856	12,725	13,595	14,638	15,334	15,681	16,029
22	10,060	11,022	11,881	12,741	13,600	14,631	15,319	15,663	16,006
22.2	10,064	11,026	11,884	12,742	13,601	14,631	15,317	15,661	16,004
24	10,107	11,058	11,907	12,756	13,606	14,625	15,304	15,644	15,984

All power in watts

Model: MRT150AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	13,900	15,359	16,662	17,965	19,268	20,832	21,874	22,396	22,917
15	14,108	15,531	16,801	18,071	19,341	20,866	21,882	22,390	22,898
16.7	14,430	15,795	17,015	18,235	19,454	20,918	21,893	22,381	22,869
18	14,675	15,998	17,179	18,359	19,540	20,957	21,902	22,374	22,847
19.4	14,940	16,254	17,427	18,600	19,691	21,000	21,873	22,309	22,745
20	15,054	16,357	17,521	18,685	19,848	21,245	22,176	22,642	23,107
22	15,432	16,828	18,074	19,320	20,566	22,061	23,058	23,557	24,055
22.2	15,470	16,875	18,129	19,383	20,638	22,143	23,147	23,648	24,150
24	15,810	17,298	18,627	19,955	21,284	22,878	23,941	24,472	25,004

All power in watts

Model: MRT200AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	17,690	19,507	21,129	22,751	24,373	26,320	27,618	28,267	28,915
15	17,939	19,723	21,315	22,908	24,501	26,412	27,686	28,323	28,960
16.7	18,323	20,056	21,603	23,151	24,698	26,554	27,792	28,411	29,030
18	18,618	20,311	21,824	23,336	24,848	26,663	27,873	28,478	29,083
19.4	18,934	20,573	22,037	23,500	24,991	26,780	27,973	28,569	29,165
20	19,070	20,752	22,253	23,754	25,256	27,057	28,258	28,859	29,459
22	19,523	21,303	22,893	24,483	26,073	27,981	29,253	29,889	30,525
22.2	19,568	21,358	22,957	24,556	26,155	28,073	29,353	29,992	30,632
24	19,975	21,855	23,534	25,212	26,891	28,905	30,248	30,919	31,591

All power in watts

Heatpump Model (R22)

Cooling Capacity

Model: MRT250AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	22,260	24,096	25,735	27,374	29,012	30,979	32,290	32,946	33,602
15	22,396	24,253	25,911	27,568	29,226	31,215	32,542	33,205	33,868
16.7	22,607	24,496	26,183	27,869	29,556	31,580	32,930	33,604	34,279
18	22,768	24,682	26,391	28,100	29,809	31,859	33,227	33,910	34,594
19.4	22,941	24,635	26,148	27,660	29,705	32,160	33,796	34,615	35,433
20	23,016	24,992	26,756	28,521	30,285	32,403	33,814	34,520	35,226
22	23,263	25,358	27,228	29,098	30,968	33,212	34,708	35,456	36,205
22.2	23,288	25,394	27,275	29,156	31,036	33,293	34,798	35,550	36,302
24	23,511	25,724	27,700	29,675	31,651	34,022	35,602	36,393	37,183

All power in watts

Model: MRT300AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	29,360	31,941	34,245	36,550	38,854	41,619	43,463	44,384	45,306
15	29,602	32,248	34,610	36,971	39,333	42,167	44,057	45,002	45,946
16.7	29,977	32,722	35,172	37,623	40,074	43,015	44,975	45,955	46,936
18	30,264	33,084	35,603	38,122	40,640	43,662	45,677	46,685	47,692
19.4	30,572	32,937	35,049	37,160	40,433	44,360	46,978	48,287	49,596
20	30,704	33,616	36,216	38,816	41,416	44,536	46,616	47,656	48,695
22	31,145	34,088	36,715	39,342	41,969	45,121	47,223	48,274	49,325
22.2	31,189	34,135	36,764	39,394	42,024	45,180	47,284	48,336	49,387
24	31,586	34,559	37,213	39,867	42,522	45,707	47,830	48,892	49,954

All power in watts

Heatpump Model (R407C)

Cooling Capacity

Model: M4RT080AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	6,250	6,917	7,513	8,109	8,704	9,419	9,896	10,134	10,372
15	6,348	7,036	7,650	8,264	8,878	9,615	10,107	10,352	10,598
16.7	6,499	7,219	7,862	8,504	9,147	9,919	10,433	10,690	10,947
18	6,615	7,359	8,024	8,688	9,353	10,150	10,682	10,948	11,214
19.4	6,739	7,339	7,875	8,410	9,315	10,400	11,124	11,485	11,847
20	6,793	7,551	8,227	8,904	9,581	10,393	10,934	11,205	11,475
22	6,971	7,686	8,325	8,963	9,602	10,369	10,879	11,135	11,390
22.2	6,988	7,699	8,334	8,969	9,604	10,366	10,874	11,128	11,382
24	7,149	7,821	8,422	9,023	9,623	10,344	10,825	11,065	11,305

All power in watts

Model: M4RT100AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	8,630	9,364	10,020	10,676	11,332	12,118	12,643	12,905	13,168
15	8,692	9,451	10,128	10,806	11,484	12,297	12,839	13,110	13,381
16.7	8,787	9,584	10,296	11,007	11,719	12,572	13,141	13,426	13,711
18	8,860	9,686	10,423	11,161	11,898	12,783	13,373	13,668	13,963
19.4	8,939	9,614	10,217	10,820	11,815	13,010	13,806	14,205	14,603
20	8,972	9,831	10,597	11,363	12,129	13,049	13,662	13,968	14,275
22	9,085	9,947	10,716	11,486	12,255	13,179	13,794	14,102	14,410
22.2	9,096	9,958	10,728	11,498	12,268	13,192	13,808	14,116	14,424
24	9,197	10,063	10,835	11,608	12,381	13,309	13,927	14,236	14,545

All power in watts

Heatpump Model (R407C)

Cooling Capacity

Model: M4RT150AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	12,660	13,902	15,010	16,119	17,228	18,558	19,445	19,889	20,332
15	12,815	14,083	15,215	16,347	17,478	18,837	19,742	20,195	20,648
16.7	13,055	14,363	15,530	16,698	17,866	19,267	20,201	20,668	21,135
18	13,238	14,577	15,772	16,967	18,162	19,596	20,552	21,030	21,508
19.4	13,436	14,561	15,565	16,570	18,106	19,950	21,179	21,794	22,408
20	13,520	14,886	16,105	17,324	18,543	20,006	20,982	21,469	21,957
22	13,802	15,148	16,349	17,551	18,752	20,194	21,155	21,635	22,116
22.2	13,831	15,174	16,374	17,573	18,773	20,212	21,172	21,652	22,132
24	14,085	15,410	16,594	17,777	18,961	20,381	21,328	21,801	22,275

All power in watts

Model: M4RT200AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	16,250	17,818	19,218	20,619	22,019	23,699	24,819	25,379	25,940
15	16,439	18,008	19,409	20,810	22,210	23,891	25,012	25,572	26,133
16.7	16,731	18,301	19,703	21,105	22,506	24,188	25,310	25,870	26,431
18	16,955	18,525	19,928	21,330	22,733	24,415	25,537	26,098	26,659
19.4	17,195	18,619	19,889	21,160	22,751	24,660	25,933	26,569	27,205
20	17,298	18,886	20,303	21,720	23,138	24,838	25,972	26,539	27,106
22	17,642	19,282	20,747	22,211	23,675	25,433	26,604	27,190	27,775
22.2	17,677	19,322	20,791	22,260	23,729	25,492	26,667	27,255	27,842
24	17,986	19,679	21,190	22,702	24,213	26,027	27,236	27,841	28,445

All power in watts

Model: M4RT250AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	22,920	24,980	26,819	28,658	30,497	32,704	34,175	34,911	35,647
15	23,127	25,136	26,930	28,724	30,518	32,671	34,106	34,824	35,542
16.7	23,447	25,378	27,102	28,827	30,551	32,621	34,000	34,690	35,380
18	23,691	25,563	27,234	28,905	30,576	32,582	33,919	34,587	35,256
19.4	23,955	25,838	27,519	29,200	30,718	32,540	33,755	34,362	34,969
20	24,068	25,944	27,619	29,295	30,970	32,980	34,321	34,991	35,661
22	24,444	26,550	28,430	30,311	32,192	34,448	35,953	36,705	37,457
22.2	24,481	26,611	28,512	30,413	32,314	34,595	36,116	36,876	37,637
24	24,820	27,156	29,242	31,327	33,413	35,916	37,585	38,419	39,253

All power in watts

Model: M4RT300AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	30,340	32,950	35,281	37,612	39,942	42,739	44,604	45,536	46,468
15	30,568	33,218	35,584	37,950	40,316	43,155	45,048	45,995	46,941
16.7	30,921	33,632	36,053	38,473	40,894	43,799	45,735	46,703	47,671
18	31,191	33,949	36,411	38,873	41,336	44,290	46,260	47,245	48,230
19.4	31,481	33,879	36,019	38,160	41,187	44,820	47,242	48,453	49,664
20	31,606	34,446	36,982	39,517	42,053	45,096	47,125	48,139	49,153
22	32,021	34,967	37,598	40,229	42,860	46,016	48,121	49,173	50,226
22.2	32,062	35,020	37,660	40,300	42,940	46,108	48,221	49,277	50,333
24	32,436	35,489	38,215	40,940	43,666	46,937	49,117	50,208	51,298

All power in watts

Heatpump Model (R22)

Heating Capacity

Model: MRT080AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	6,592	7,043	7,446	7,849	8,252	8,736	9,058	9,220	9,381
15	7,580	8,264	8,874	9,485	10,095	10,828	11,316	11,560	11,805
16.7	7,658	8,422	9,106	9,789	10,472	11,291	11,838	12,111	12,384
18	7,717	8,544	9,282	10,021	10,759	11,645	12,236	12,532	12,827
19.4	7,780	7,787	7,794	7,800	8,260	8,813	9,181	9,366	9,550
20	7,808	8,683	9,465	10,247	11,028	11,966	12,592	12,904	13,217
22	7,899	8,713	9,439	10,166	10,892	11,764	12,345	12,636	12,927
22.2	7,908	8,716	9,437	10,158	10,879	11,744	12,321	12,609	12,898
24	6,630	7,254	7,811	8,368	8,925	9,594	10,040	10,263	10,485

All power in watts

Model: MRT100AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	8,380	8,985	9,526	10,067	10,607	11,256	11,688	11,905	12,121
15	9,896	10,672	11,364	12,057	12,750	13,581	14,136	14,413	14,690
16.7	9,936	10,789	11,551	12,314	13,076	13,990	14,600	14,905	15,210
18	9,966	10,879	11,694	12,510	13,325	14,303	14,955	15,281	15,608
19.4	9,999	10,017	10,034	10,050	10,509	11,060	11,427	11,611	11,795
20	10,013	10,987	11,856	12,725	13,595	14,638	15,334	15,681	16,029
22	10,060	11,022	11,881	12,741	13,600	14,631	15,319	15,663	16,006
22.2	10,064	11,026	11,884	12,742	13,601	14,631	15,317	15,661	16,004
24	8,543	9,347	10,064	10,782	11,500	12,362	12,936	13,223	13,510

All power in watts

Model: MRT150AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	13,100	13,973	14,753	15,533	16,312	17,248	17,872	18,184	18,496
15	14,108	15,531	16,801	18,071	19,341	20,866	21,882	22,390	22,898
16.7	14,430	15,795	17,015	18,235	19,454	20,918	21,893	22,381	22,869
18	14,675	15,998	17,179	18,359	19,540	20,957	21,902	22,374	22,847
19.4	14,940	15,105	15,253	15,400	16,582	18,000	18,945	19,418	19,891
20	15,054	16,357	17,521	18,685	19,848	21,245	22,176	22,642	23,107
22	15,432	16,828	18,074	19,320	20,566	22,061	23,058	23,557	24,055
22.2	15,470	16,875	18,129	19,383	20,638	22,143	23,147	23,648	24,150
24	13,090	14,322	15,422	16,522	17,622	18,942	19,822	20,262	20,702

All power in watts

Model: MRT200AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	15,360	16,936	18,344	19,751	21,159	22,848	23,974	24,537	25,100
15	17,939	19,723	21,315	22,908	24,501	26,412	27,686	28,323	28,960
16.7	18,323	20,056	21,603	23,151	24,698	26,554	27,792	28,411	29,030
18	18,618	20,311	21,824	23,336	24,848	26,663	27,873	28,478	29,083
19.4	18,934	19,460	19,930	20,400	21,245	22,260	22,936	23,275	23,613
20	19,070	20,752	22,253	23,754	25,256	27,057	28,258	28,859	29,459
22	19,523	21,303	22,893	24,483	26,073	27,981	29,253	29,889	30,525
22.2	19,568	21,358	22,957	24,556	26,155	28,073	29,353	29,992	30,632
24	17,340	18,972	20,429	21,886	23,343	25,092	26,258	26,841	27,423

All power in watts

Heatpump Model (R22)

Heating Capacity

Model: MRT250AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	23,460	24,736	25,876	27,016	28,156	29,523	30,435	30,891	31,347
15	22,396	24,253	25,911	27,568	29,226	31,215	32,542	33,205	33,868
16.7	22,607	24,496	26,183	27,869	29,556	31,580	32,930	33,604	34,279
18	22,768	24,682	26,391	28,100	29,809	31,859	33,227	33,910	34,594
19.4	22,941	24,168	25,264	26,360	28,724	31,560	33,451	34,396	35,342
20	23,016	24,992	26,756	28,521	30,285	32,403	33,814	34,520	35,226
22	23,263	25,358	27,228	29,098	30,968	33,212	34,708	35,456	36,205
22.2	23,288	25,394	27,275	29,156	31,036	33,293	34,798	35,550	36,302
24	22,406	24,515	26,398	28,281	30,163	32,423	33,929	34,682	35,435

All power in watts

Model: MRT300AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	30,360	31,669	32,838	34,007	35,176	36,579	37,514	37,982	38,450
15	29,602	32,248	34,610	36,971	39,333	42,167	44,057	45,002	45,946
16.7	29,977	32,722	35,172	37,623	40,074	43,015	44,975	45,955	46,936
18	30,264	33,084	35,603	38,122	40,640	43,662	45,677	46,685	47,692
19.4	30,572	31,322	31,991	32,660	35,933	39,860	42,478	43,787	45,096
20	30,704	33,616	36,216	38,816	41,416	44,536	46,616	47,656	48,695
22	31,145	34,088	36,715	39,342	41,969	45,121	47,223	48,274	49,325
22.2	31,189	34,135	36,764	39,394	42,024	45,180	47,284	48,336	49,387
24	27,761	30,374	32,707	35,040	37,372	40,172	42,038	42,971	43,904

All power in watts

Heatpump Model (R407C)

Heating Capacity

Model: M4RT080AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	6,750	7,107	7,425	7,744	8,063	8,445	8,700	8,827	8,955
15	6,348	7,036	7,650	8,264	8,878	9,615	10,107	10,352	10,598
16.7	6,499	7,219	7,862	8,504	9,147	9,919	10,433	10,690	10,947
18	6,615	7,359	8,024	8,688	9,353	10,150	10,682	10,948	11,214
19.4	6,739	7,027	7,283	7,540	8,231	9,060	9,613	9,889	10,165
20	6,793	7,551	8,227	8,904	9,581	10,393	10,934	11,205	11,475
22	6,971	7,686	8,325	8,963	9,602	10,369	10,879	11,135	11,390
22.2	6,988	7,699	8,334	8,969	9,604	10,366	10,874	11,128	11,382
24	6,409	7,012	7,551	8,089	8,628	9,274	9,705	9,920	10,136

All power in watts

Model: M4RT100AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	8,640	9,134	9,575	10,017	10,458	10,987	11,340	11,517	11,693
15	8,692	9,451	10,128	10,806	11,484	12,297	12,839	13,110	13,381
16.7	8,787	9,584	10,296	11,007	11,719	12,572	13,141	13,426	13,711
18	8,860	9,686	10,423	11,161	11,898	12,783	13,373	13,668	13,963
19.4	8,939	9,252	9,531	9,810	10,883	12,170	13,028	13,457	13,886
20	8,972	9,831	10,597	11,363	12,129	13,049	13,662	13,968	14,275
22	9,085	9,947	10,716	11,486	12,255	13,179	13,794	14,102	14,410
22.2	9,096	9,958	10,728	11,498	12,268	13,192	13,808	14,116	14,424
24	8,339	9,123	9,824	10,525	11,225	12,066	12,627	12,907	13,187

All power in watts

Heatpump Model (R407C)

Heating Capacity

Model: M4RT150AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	14,130	14,860	15,511	16,162	16,814	17,595	18,116	18,377	18,637
15	12,815	14,083	15,215	16,347	17,478	18,837	19,742	20,195	20,648
16.7	13,055	14,363	15,530	16,698	17,866	19,267	20,201	20,668	21,135
18	13,238	14,577	15,772	16,967	18,162	19,596	20,552	21,030	21,508
19.4	13,436	14,252	14,981	15,710	17,737	20,170	21,792	22,603	23,414
20	13,520	14,886	16,105	17,324	18,543	20,006	20,982	21,469	21,957
22	13,802	15,148	16,349	17,551	18,752	20,194	21,155	21,635	22,116
22.2	13,831	15,174	16,374	17,573	18,773	20,212	21,172	21,652	22,132
24	13,354	14,610	15,732	16,855	17,977	19,323	20,221	20,670	21,119

All power in watts

Model: M4RT200AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	17,220	18,381	19,418	20,455	21,492	22,736	23,565	23,980	24,395
15	16,439	18,008	19,409	20,810	22,210	23,891	25,012	25,572	26,133
16.7	16,731	18,301	19,703	21,105	22,506	24,188	25,310	25,870	26,431
18	16,955	18,525	19,928	21,330	22,733	24,415	25,537	26,098	26,659
19.4	17,195	18,310	19,305	20,300	22,164	24,400	25,891	26,636	27,382
20	17,298	18,886	20,303	21,720	23,138	24,838	25,972	26,539	27,106
22	17,642	19,282	20,747	22,211	23,675	25,433	26,604	27,190	27,775
22.2	17,677	19,322	20,791	22,260	23,729	25,492	26,667	27,255	27,842
24	17,255	18,879	20,329	21,779	23,229	24,969	26,129	26,709	27,289

All power in watts

Model: M4RT250AR

Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	24,320	25,382	26,331	27,280	28,228	29,366	30,125	30,505	30,884
15	23,127	25,136	26,930	28,724	30,518	32,671	34,106	34,824	35,542
16.7	23,447	25,378	27,102	28,827	30,551	32,621	34,000	34,690	35,380
18	23,691	25,563	27,234	28,905	30,576	32,582	33,919	34,587	35,256
19.4	23,955	24,768	25,494	26,220	28,920	32,160	34,320	35,400	36,480
20	24,068	25,944	27,619	29,295	30,970	32,980	34,321	34,991	35,661
22	24,444	26,550	28,430	30,311	32,192	34,448	35,953	36,705	37,457
22.2	24,481	26,611	28,512	30,413	32,314	34,595	36,116	36,876	37,637
24	22,287	24,385	26,257	28,130	30,003	32,251	33,749	34,498	35,247

All power in watts

Model: M4RT300AR

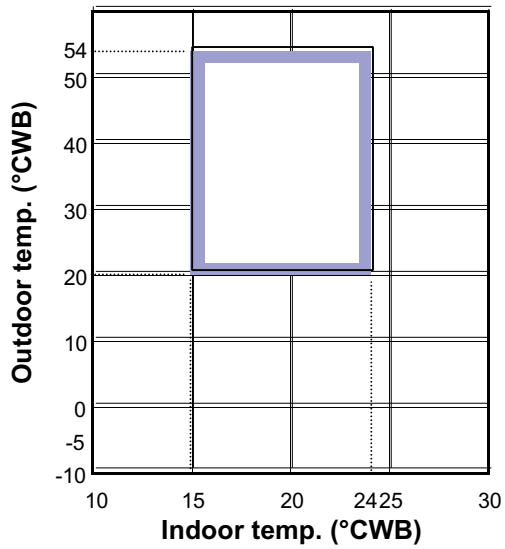
Indoor WB	Outdoor DB, °C								
°C	19.4	25	30	35	40	46	50	52	54
13.9	26,680	29,264	31,571	33,878	36,185	38,954	40,799	41,722	42,645
15	30,568	33,218	35,584	37,950	40,316	43,155	45,048	45,995	46,941
16.7	30,921	33,632	36,053	38,473	40,894	43,799	45,735	46,703	47,671
18	31,191	33,949	36,411	38,873	41,336	44,290	46,260	47,245	48,230
19.4	31,481	32,666	33,723	34,780	37,889	41,620	44,107	45,351	46,595
20	31,606	34,446	36,982	39,517	42,053	45,096	47,125	48,139	49,153
22	32,021	34,967	37,598	40,229	42,860	46,016	48,121	49,173	50,226
22.2	32,062	35,020	37,660	40,300	42,940	46,108	48,221	49,277	50,333
24	29,563	32,345	34,830	37,314	39,798	42,779	44,767	45,761	46,754

All power in watts

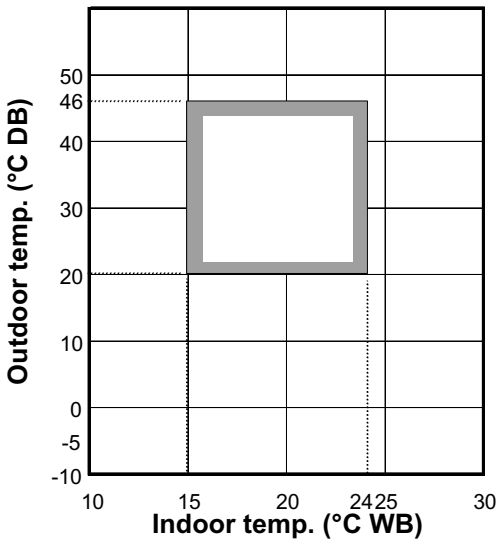
Operating Range

Ensure the operating temperature is in allowable range.

Cooling (R22)

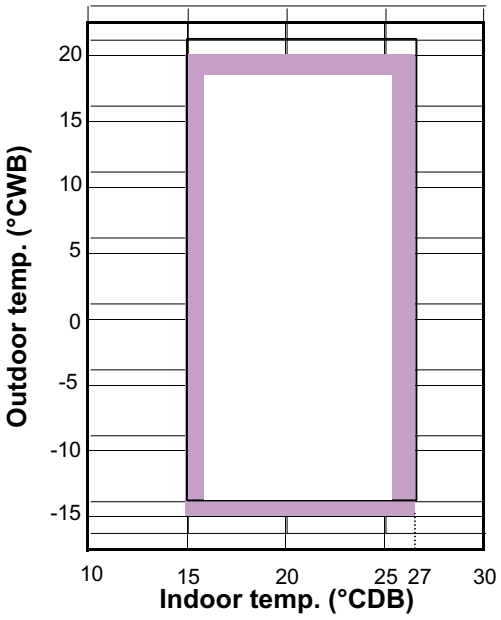


Cooling (R407C)

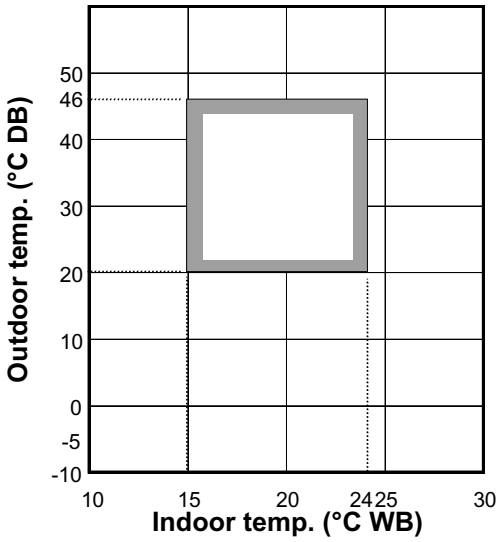


Heat pump (R22 & R407C)

Heating



Cooling



⚠ Caution :

The use of your air conditioner outside the range of working temperature and humidity can result in serious failure.

Drive Package Selection Table

M(4)RT060A/AR

Std.

Total SP (Pa)	CMM		40	45	50	55	60
150	Fan Speed	RPM	860	860	950	950	1000
	Pulley Size (Motor)	mm	100	100	100	100	112
		inch	4	4	4	4	4.4
	Pulley Size (Fan Side)	mm	180	180	160	160	160
		inch	7	7	6.3	6.3	6.3
	Belt Size	mm	850	850	825	825	850
	Motor	kW	0.55	0.55	0.75	0.75	0.75
200	Fan Speed	RPM	980	980	1020	1020	1020
	Pulley Size (Motor)	mm	100	100	112	112	112
		inch	4	4	4.4	4.4	4.4
	Pulley Size (Fan Side)	mm	160	160	160	160	160
		inch	6.3	6.3	6.3	6.3	6.3
	Belt Size	mm	825	825	850	850	850
	Motor	kW	0.55	0.55	0.75	0.75	0.75
250	Fan Speed	RPM	1020	1020	1060	1060	1100
	Pulley Size (Motor)	mm	112	112	125	125	112
		inch	4.4	4.4	5	5	4.4
	Pulley Size (Fan Side)	mm	160	160	160	160	140
		inch	6.3	6.3	6.3	6.3	5.5
	Belt Size	mm	850	850	850	850	825
	Motor	kW	0.55	0.55	0.75	0.75	0.75

M(4)RT080A/AR

❋ Std.

Air flow / Total SP (Pa)		CMM	70	75	80	85	90	95
		L/S	1170	1250	1330	1420	1500	1580
200	Fan speed	rpm	967	967	967	1036	1036	1036
	Pulley size (Motor side)	mm	101.6	101.6	101.6	127	127	127
		inch	4	4	4	5	5	5
	Pulley size (Fan side)	mm	152.4	152.4	152.4	177.8	177.8	177.8
		inch	6	6	6	7	7	7
	Belt size	inch	B30	B30	B30	B34	B34	B34
	Motor	kW	1.1	1.1	1.1	1.1	1.1	1.1
300	Fan speed	rpm	1139	1139	1139	1139	1208	1208
	Pulley size (Motor side)	mm	139.7	139.7	139.7	139.7	127	127
		inch	5.5	5.5	5.5	5.5	5	5
	Pulley size (Fan side)	mm	177.8	177.8	177.8	177.8	152.4	152.4
		inch	7	7	7	7	6	6
	Belt size	inch	B34	B34	B34	B34	B32	B32
	Motor	kW	1.1	1.1	1.1	1.1	1.1	1.1
400	Fan speed	rpm	1305	1305	1305	1329	1329	-
	Pulley size (Motor side)	mm	114.3	114.3	114.3	139.7	139.7	-
		inch	4.5	4.5	4.5	5.5	5.5	-
	Pulley size (Fan side)	mm	127	127	127	152.4	152.4	-
		inch	5	5	5	6	6	-
	Belt size	inch	B33	B33	B33	B33	B33	-
	Motor	kW	1.5	1.5	1.5	1.5	1.5	-

M(4)RT100A/AR, 120A

❄ Std.

Total SP (Pa) \ Air flow		CMM	90	100	110	120
		L/S	1500	1660	1830	2000
250	Fan speed	rpm	1088	1088	1139	1318
	Pulley size (Motor side)	mm	114.3	114.3	139.7	127
		inch	4.5	4.5	5.5	5
	Pulley size (Fan side)	mm	152.4	152.4	177.8	139.7
		inch	6	6	7	5.5
	Belt size	inch	B31	B31	B34	B31
	Motor	kW	1.5	1.5	1.5	2.2
350	Fan speed	rpm	1208	1208	1318	1318
	Pulley size (Motor side)	mm	127	127	127	127
		inch	5	5	5	5
	Pulley size (Fan side)	mm	152.4	152.4	139.7	139.7
		inch	6	6	5.5	5.5
	Belt size	inch	B32	B32	B31	B31
	Motor	kW	1.5	1.5	2.2	2.2
450	Fan speed	rpm	1450	1450	1450	-
	Pulley size (Motor side)	mm	127	127	127	-
		inch	5	5	5	-
	Pulley size (Fan side)	mm	127	127	127	-
		inch	5	5	5	-
	Belt size	inch	B30	B30	B30	-
	Motor	kW	1.5	2.2	2.2	-
550	Fan speed	rpm	1595	-	-	-
	Pulley size (Motor side)	mm	139.7	-	-	-
		inch	5.5	-	-	-
	Pulley size (Fan side)	mm	127	-	-	-
		inch	5	-	-	-
	Belt size	inch	B31	-	-	-
	Motor	kW	2.2	-	-	-

M(4)RT150A/AR

❄ Std.

Total SP (Pa) \ Air flow		CMM	120	130	140	150	160	170	180
		L/S	2000	2170	2330	2500	2670	2830	3000
200	Fan speed	rpm	659	659	659	659	659	659	659
	Pulley size (Motor side)	mm	127	127	127	127	127	127	127
		inch	5	5	5	5	5	5	5
	Pulley size (Fan side)	mm	279.4	279.4	279.4	279.4	279.4	279.4	279.4
		inch	11	11	11	11	11	11	11
	Belt size	inch	B44x2	B44x2	B44x2	B44x2	B44x2	B44x2	B44x2
	Motor	kW	2.2	2.2	2.2	2.2	2.2	2.2	2.2
300	Fan speed	rpm	791	791	791	791	791	791	791
	Pulley size (Motor side)	mm	152.4	152.4	152.4	152.4	152.4	152.4	152.4
		inch	5	5	5	5	5	5	5
	Pulley size (Fan side)	mm	279.4	279.4	279.4	279.4	279.4	279.4	279.4
		inch	10	10	10	10	10	10	10
	Belt size	inch	B42x2	B42x2	B42x2	B42x2	B42x2	B42x2	B42x2
	Motor	kW	2.2	2.2	2.2	2.2	2.2	3.7	3.7
400	Fan speed	rpm	886	886	886	906	906	906	906
	Pulley size (Motor side)	mm	139.7	139.7	139.7	127	127	127	127
		inch	5.5	5.5	5.5	5	5	5	5
	Pulley size (Fan side)	mm	228.6	228.6	228.6	203.2	203.2	203.2	203.2
		inch	9	9	9	8	8	8	8
	Belt size	inch	B41x2	B41x2	B41x2	B38x2	B38x2	B38x2	B38x2
	Motor	kW	2.2	2.2	2.2	3.7	3.7	3.7	3.7
500	Fan speed	rpm	997	997	997	997	997	997	997
	Pulley size (Motor side)	mm	139.7	139.7	139.7	139.7	139.7	139.7	139.7
		inch	5.5	5.5	5.5	5.5	5.5	5.5	5.5
	Pulley size (Fan side)	mm	203.2	203.2	203.2	203.2	203.2	203.2	203.2
		inch	8	8	8	8	8	8	8
	Belt size	inch	B39x2	B39x2	B39x2	B39x2	B39x2	B39x2	B39x2
	Motor	kW	3.7	3.7	3.7	3.7	3.7	3.7	3.7
600	Fan speed	rpm	1088	1088	1088	-	-	-	-
	Pulley size (Motor side)	mm	152.4	152.4	152.4	-	-	-	-
		inch	6	6	6	-	-	-	-
	Pulley size (Fan side)	mm	203.2	203.2	203.2	-	-	-	-
		inch	8	8	8	-	-	-	-
	Belt size	inch	B40x2	B40x2	B40x2	-	-	-	-
	Motor	kW	3.7	3.7	3.7	-	-	-	-

M(4)RT200A/AR

❄ Std.

Total SP (Pa) \ Air flow		CMM	160	170	180	190	200
		L/S	2665	2830	3000	3170	3330
300	Fan speed	rpm	798	798	798	798	798
	Pulley size (Motor side)	mm	139.7	139.7	139.7	139.7	139.7
		inch	5.5	5.5	5.5	5.5	5.5
	Pulley size (Fan side)	mm	254	254	254	254	254
		inch	10	10	10	10	10
	Belt size	inch	B42x2	B42x2	B42x2	B42x2	B42x2
	Motor	kW	3.7	3.7	3.7	3.7	3.7
400	Fan speed	rpm	906	906	906	906	906
	Pulley size (Motor side)	mm	127	127	127	127	127
		inch	5	5	5	5	5
	Pulley size (Fan side)	mm	203.2	203.2	203.2	203.2	203.2
		inch	8	8	8	8	8
	Belt size	inch	B38x2	B38x2	B38x2	B38x2	B38x2
	Motor	kW	3.7	3.7	3.7	3.7	3.7
500	Fan speed	rpm	997	997	997	997	997
	Pulley size (Motor side)	mm	139.7	139.7	139.7	139.7	139.7
		inch	5.5	5.5	5.5	5.5	5.5
	Pulley size (Fan side)	mm	203.2	203.2	203.2	203.2	203.2
		inch	8	8	8	8	8
	Belt size	inch	B39x2	B39x2	B39x2	B39x2	B39x2
	Motor	kW	3.7	3.7	3.7	3.7	3.7
600	Fan speed	rpm	1088	1088	1088	1088	1088
	Pulley size (Motor side)	mm	152.4	152.4	152.4	152.4	152.4
		inch	6	6	6	6	6
	Pulley size (Fan side)	mm	203.2	203.2	203.2	203.2	203.2
		inch	8	8	8	8	8
	Belt size	inch	B40x2	B40x2	B40x2	B40x2	B40x2
	Motor	kW	5.5	5.5	5.5	5.5	5.5
700	Fan speed	rpm	1208	1208	1208	1208	1208
	Pulley size (Motor side)	mm	127	127	127	127	127
		inch	5	5	5	5	5
	Pulley size (Fan side)	mm	152.4	152.4	152.4	152.4	152.4
		inch	6	6	6	6	6
	Belt size	inch	B35x2	B35x2	B35x2	B35x2	B35x2
	Motor	kW	5.5	5.5	5.5	5.5	5.5

Note: Air flow reduce 25% from side flow to down flow (for RT 80 – 200 A/AR only).

M(4)RT250A/AR

❄ Std.

ESP(mm) \ Air flow		CFM	6350	6720	7060	7400	7780	8125	8470	8840	9190	9500
		CMM	180	190	200	210	220	230	240	250	260	270
20	Fan speed	rpm	740	740	743	747	747	747	747	800	820	820
	Pulley Size (Motor Size)	mm	125	125	125	125	125	125	125	125	125	125
	Pulley Size (Fan Size)	mm	250	250	250	250	250	250	250	250	224	224
	Belt length X2	mm	1762	1762	1762	1762	1762	1762	1762	1762	1650	1650
	Motor	KW	4	4	4	4	5.5	5.5	5.5	5.5	5.5	7.5
30	Fan speed	rpm	806	814	827	840	840	850	850	860	920	920
	Pulley Size (Motor Size)	mm	125	125	125	125	125	125	125	125	140	140
	Pulley Size (Fan Size)	mm	224	224	224	224	224	224	224	224	224	224
	Belt length X2	mm	1650	1650	1650	1650	1650	1650	1650	1650	1700	1700
	Motor	KW	4	4	4	5.5	5.5	5.5	5.5	5.5	7.5	7.5
40	Fan speed	rpm	826	839	847	916	916	916	920	920	950	950
	Pulley Size (Motor Size)	mm	125	125	125	132	132	132	140	140	140	140
	Pulley Size (Fan Size)	mm	224	224	224	224	224	224	224	224	224	224
	Belt length X2	mm	1650	1650	1650	1662	1662	1662	1700	1700	1700	1700
	Motor	KW	4	4	5.5	5.5	5.5	5.5	7.5	7.5	7.5	7.5
50	Fan speed	rpm	891	899	900	940	940	990	990	1000	1000	-
	Pulley Size (Motor Size)	mm	132	132	132	140	140	140	140	140	140	-
	Pulley Size (Fan Size)	mm	224	224	224	224	224	200	200	200	200	-
	Belt length X2	mm	1662	1662	1662	1700	1700	1700	1700	1700	1700	-
	Motor	KW	5.5	5.5	5.5	5.5	5.5	7.5	7.5	7.5	7.5	-

M(4)RT300A/AR

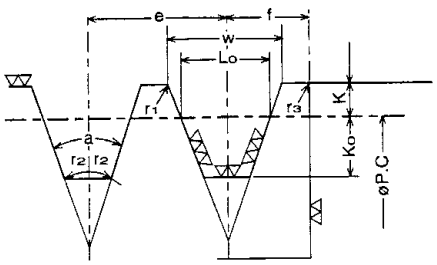
❄ Std.

ESP(mm) \ Air flow		CFM	7780	8125	8470	8840	9190	9500	9875	10250
		CMM	220	230	240	250	260	270	280	290
20	Fan speed	rpm	747	747	747	800	820	820	825	850
	Pulley Size (Motor Size)	mm	125	125	125	125	125	125	125	125
	Pulley Size (Fan Size)	mm	250	250	250	224	224	224	224	224
	Belt length X2	mm	1762	1762	1762	1650	1650	1650	1650	1650
	Motor	KW	5.5	5.5	5.5	5.5	5.5	7.5	7.5	7.5
30	Fan speed	rpm	840	850	850	860	920	920	920	920
	Pulley Size (Motor Size)	mm	125	125	125	125	140	140	140	140
	Pulley Size (Fan Size)	mm	224	224	224	224	224	224	224	224
	Belt length X2	mm	1650	1650	1650	1650	1700	1700	1700	1700
	Motor	KW	5.5	5.5	5.5	5.5	7.5	7.5	7.5	7.5
40	Fan speed	rpm	916	916	920	920	950	950	-	-
	Pulley Size (Motor Size)	mm	132	132	140	140	140	140	-	-
	Pulley Size (Fan Size)	mm	224	224	224	224	200	200	-	-
	Belt length X2	mm	1662	1662	1700	1700	1700	1700	-	-
	Motor	KW	5.5	5.5	7.5	7.5	7.5	7.5	-	-
50	Fan speed	rpm	940	990	990	1000	1000	-	-	-
	Pulley Size (Motor Size)	mm	140	140	140	140	140	-	-	-
	Pulley Size (Fan Size)	mm	224	200	200	200	200	-	-	-
	Belt length X2	mm	1700	1700	1700	1700	1700	-	-	-
	Motor	KW	5.5	7.5	7.5	7.5	7.5	-	-	-

Pulley outside dimensions are shown below : (Unit : mm)

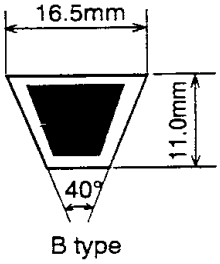
(1) Shape of belt groove

1.1

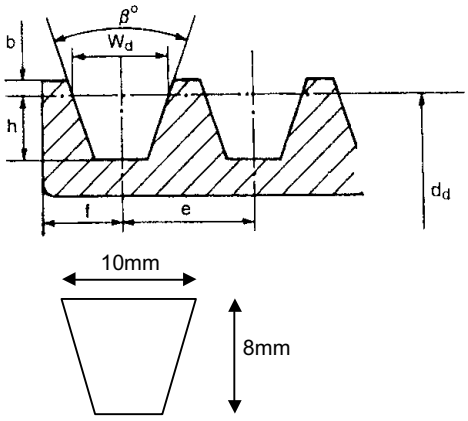


Shape of V-belt	Nominal Dia. ∅P.C	a (°)	W	Lo	K	Ko	e	f	r_1	r_2	r_3	V-belt thickness (Reference)
B	Over 125 Under 160	34	15.86	12.5	5.5	9.5	19.0	12.5	0.2~0.5	0.5~1.0	1~2	11
	Over 160 Under 200	36	16.07									
	Over 200	38	16.29									

Sectional plan of V-belt



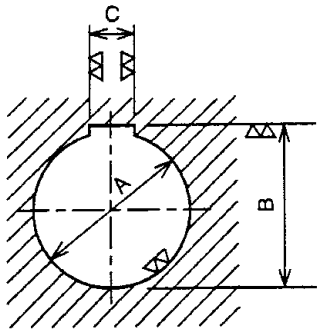
1.2 Taper lock type (MRT250/300A/AR)



Section	Sheave dia. d_d	Groove angle β	W_d	b_{min}	h_{min}	e	f
SPZ	71 – 80 > 80	34° 38°	8.5	2.0	9.0	12 ± 0.3	8 ± 1

Sectioned plan of V-belt

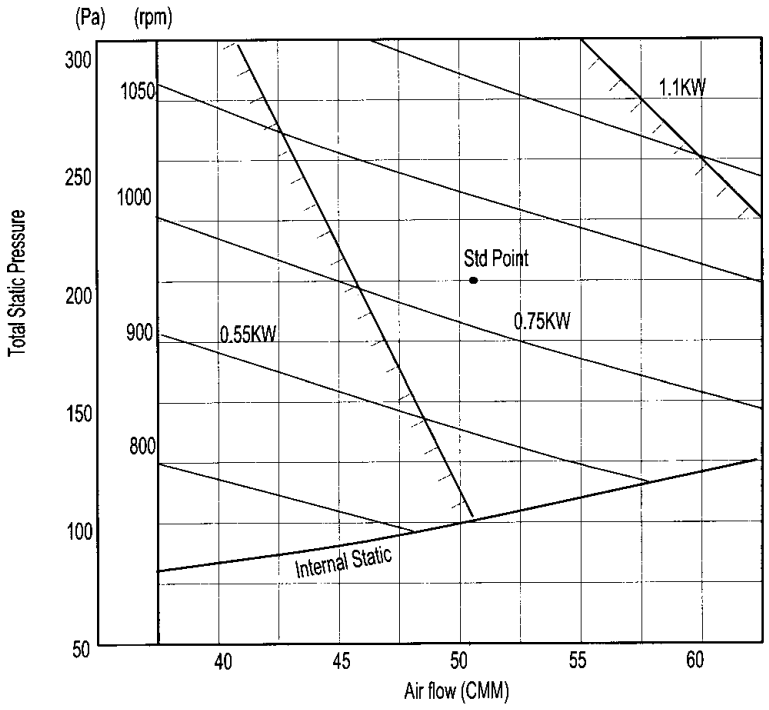
(2) Shape of motor pulley boss (Unit:mm)



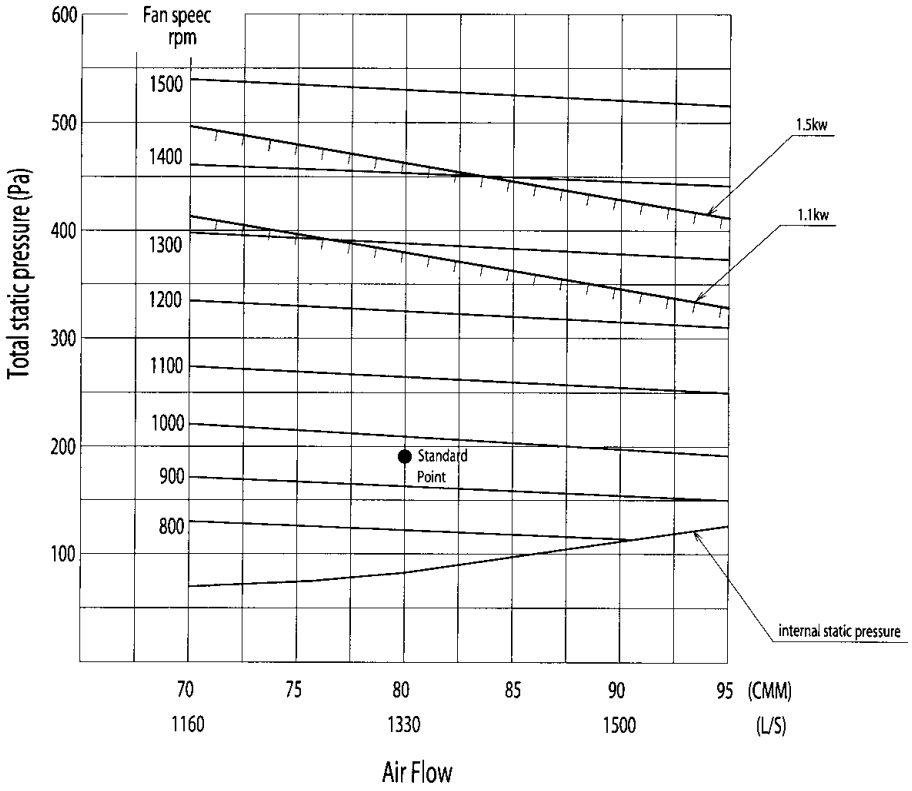
MOTOR CAPACITY (kW)	A		B		C	
1.1, 1.5	**∅24**	+0.028 +0.007	**27**	+0.128 +0.007	**8**	+0.018 -0.018
2.2, 3.7	**∅28**	+0.028 +0.007	**31**	+0.128 +0.007	**8**	+0.028 -0.013
5.5, 7.5	**∅38**	+0.028 +0.007	**41**	+0.128 +0.009	**10**	+0.028 -0.013

Fan Performance Curve

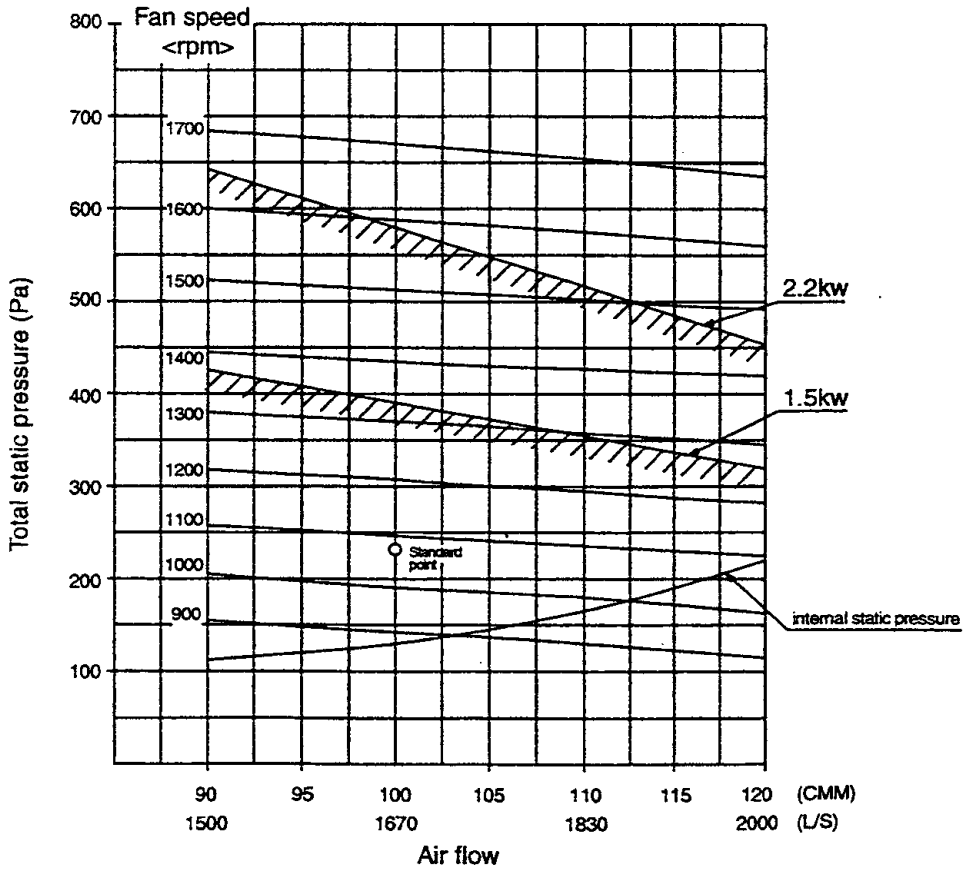
M(4)RT060A/AR



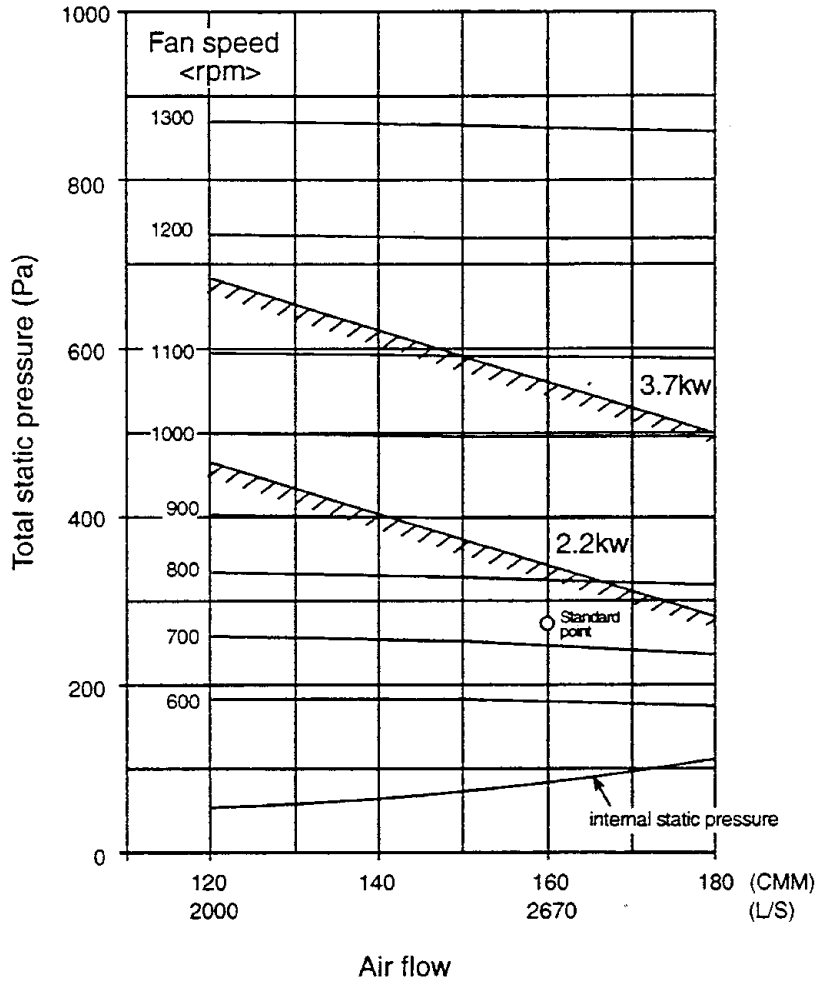
M(4)RT080A/AR



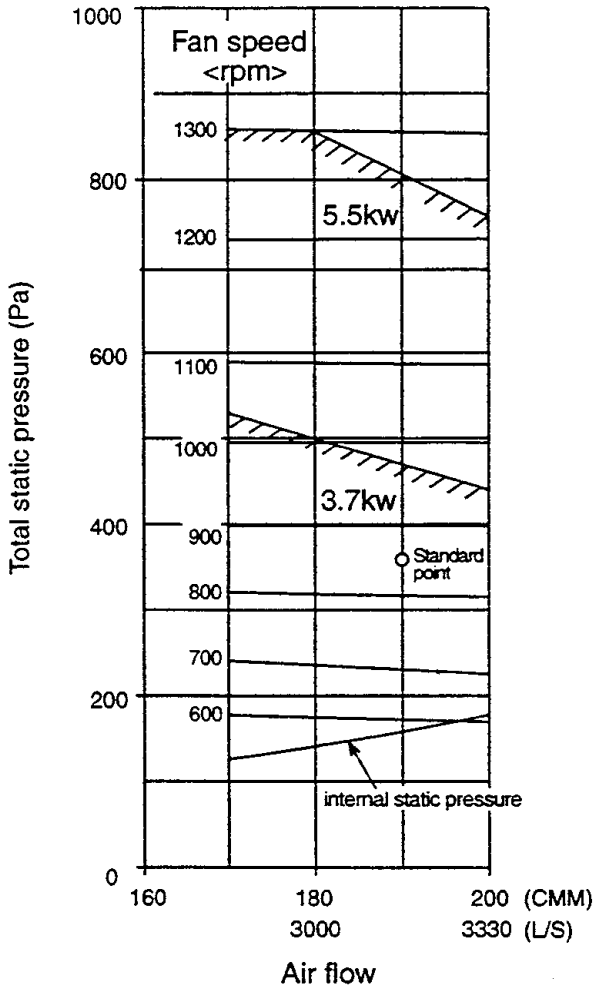
M(4)RT100A/AR, 120A



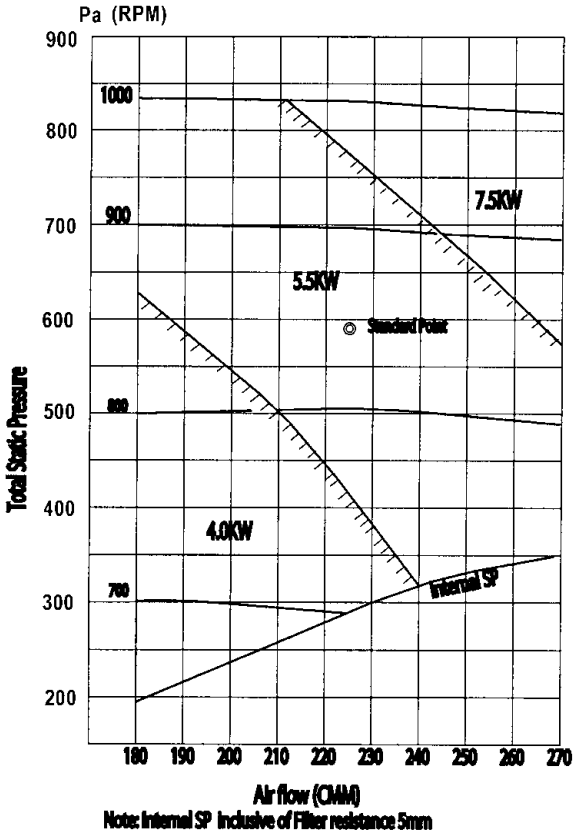
M(4)RT150A/AR



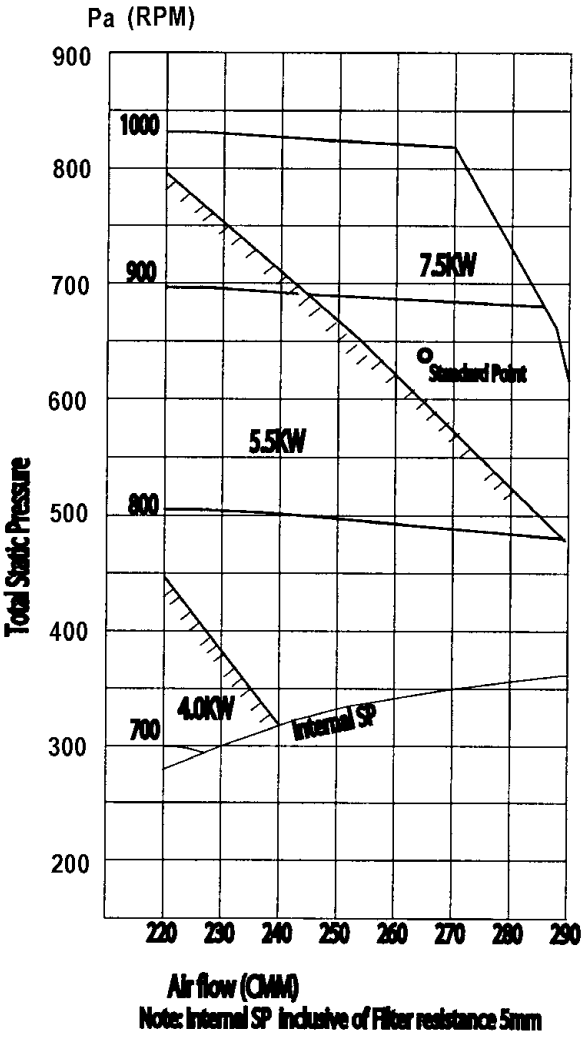
M(4)RT200A/AR



M(4)RT250A/AR

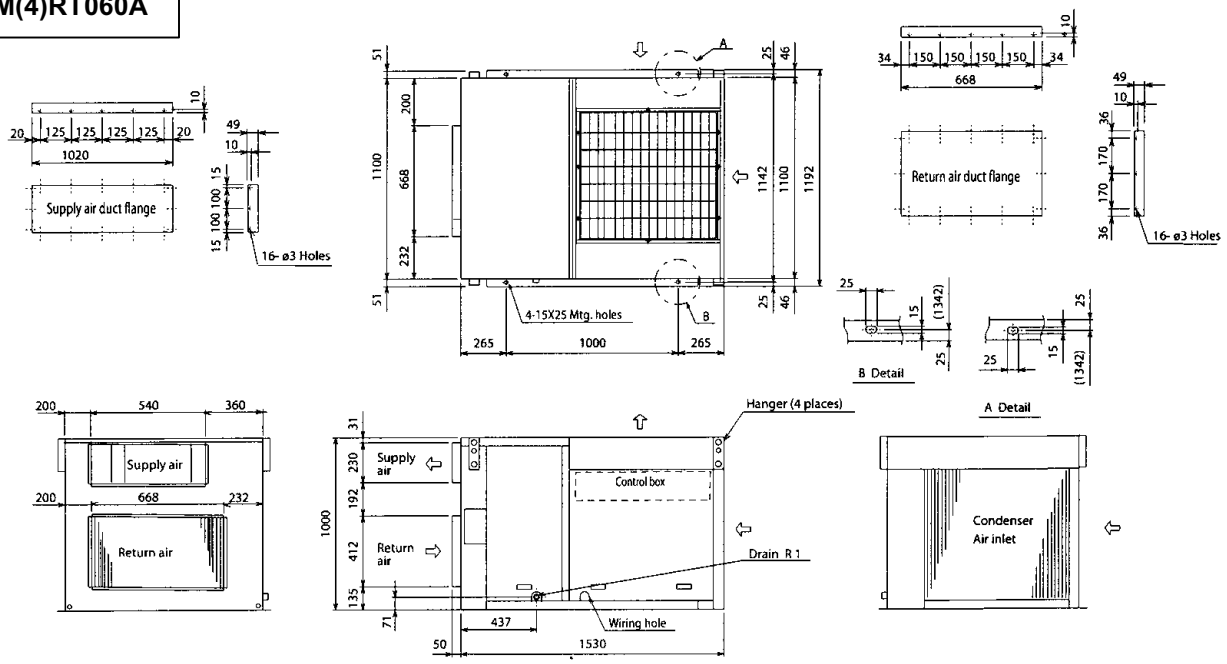


M(4)RT300A/AR


Pa (RPM)
900
800
700
600
500
400
300
200
1000
900
800
700
7.5KW
5.5KW
4.0KW
Standard Point
Internal SP
Total Static Pressure
220
230
240
250
260
270
280
290
Air flow (CMM)
Note: Internal SP Inclusive of Filter resistance 5mm

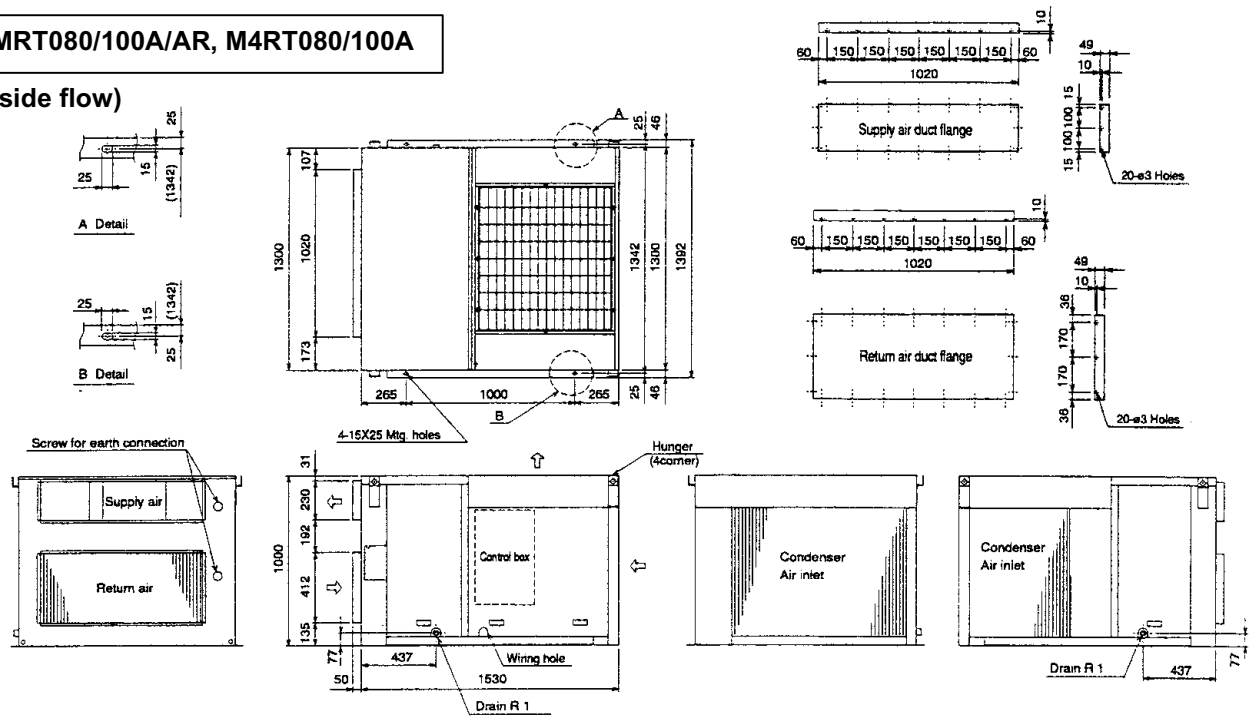
Outlines And Dimensions

M(4)RT060A



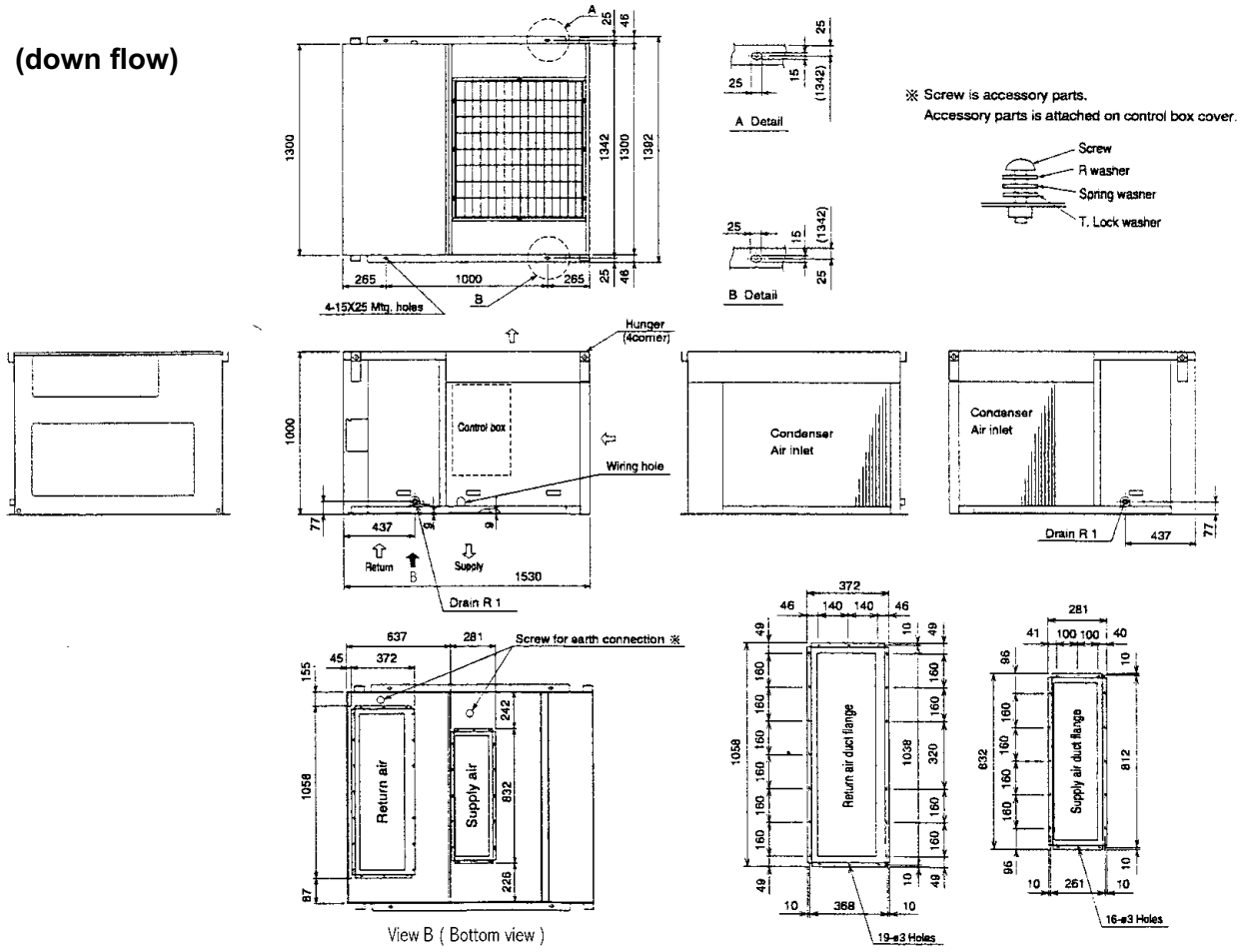
MRT080/100A/AR, M4RT080/100A

(side flow)



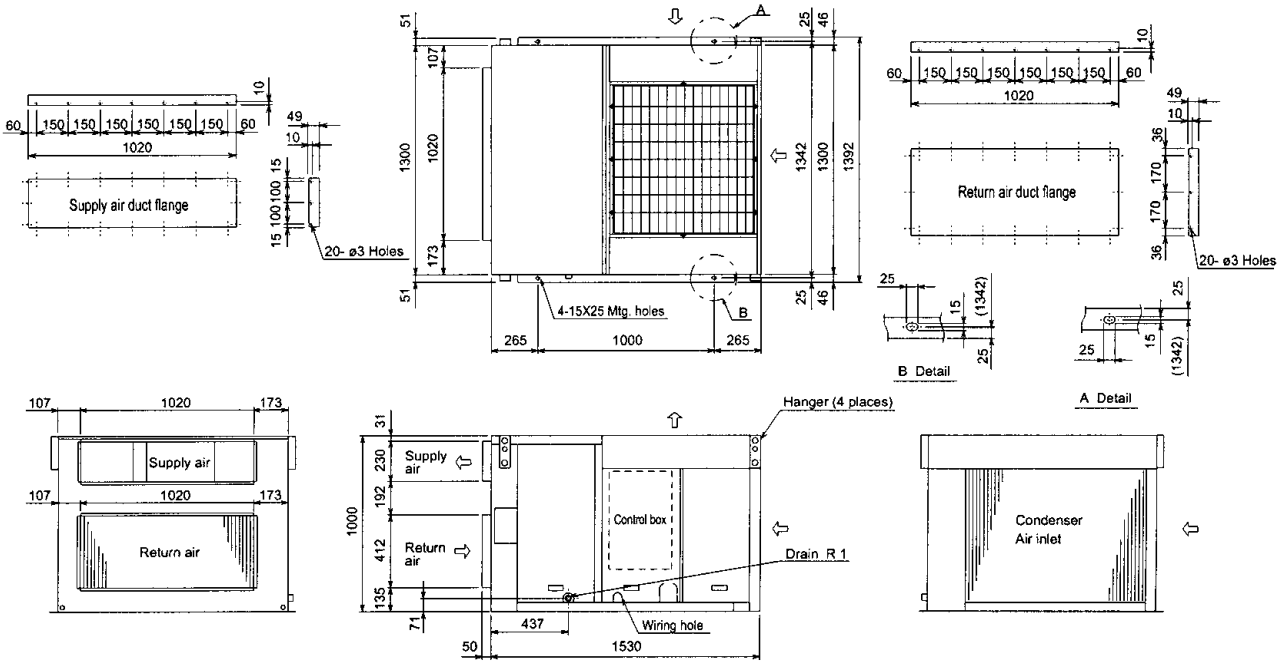
MRT080/100A/AR, M4RT080/100A

(down flow)



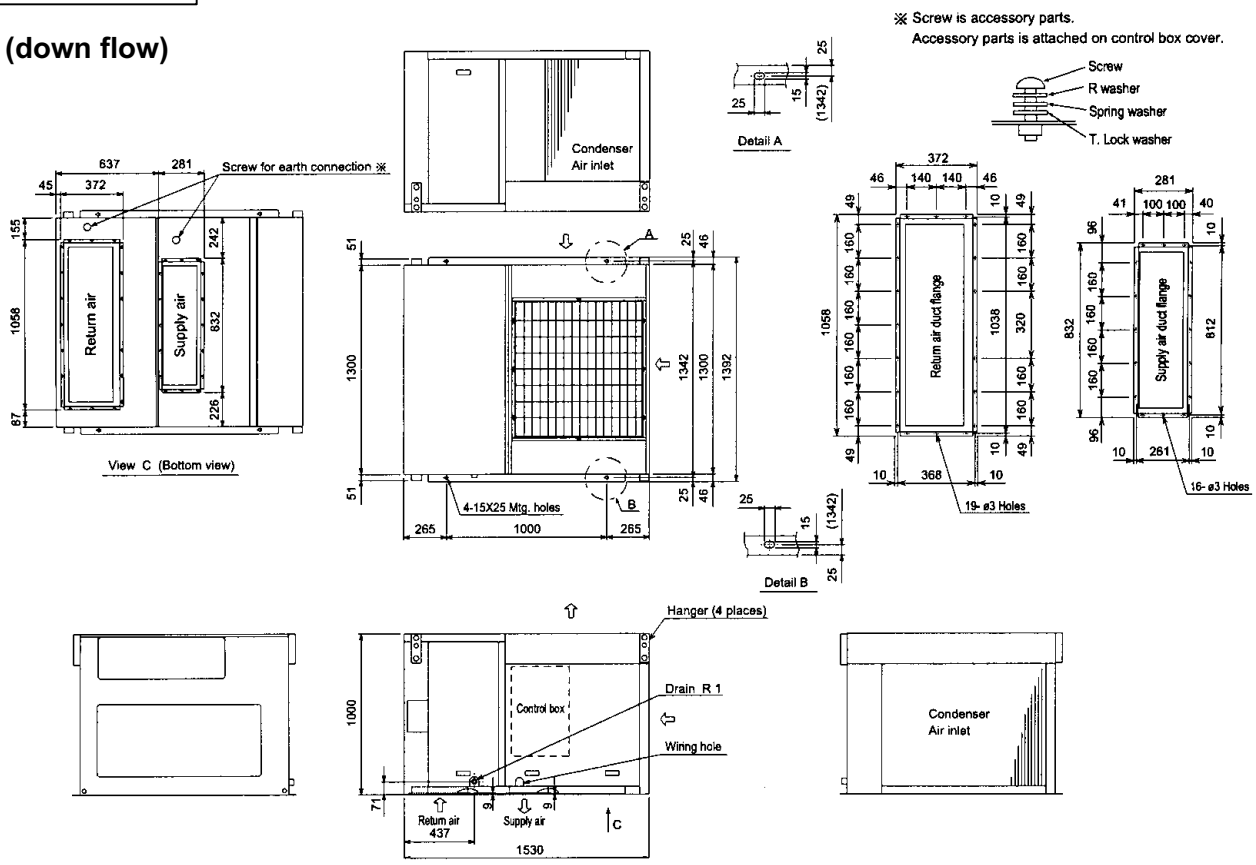
M(4)RT120A

(side flow)



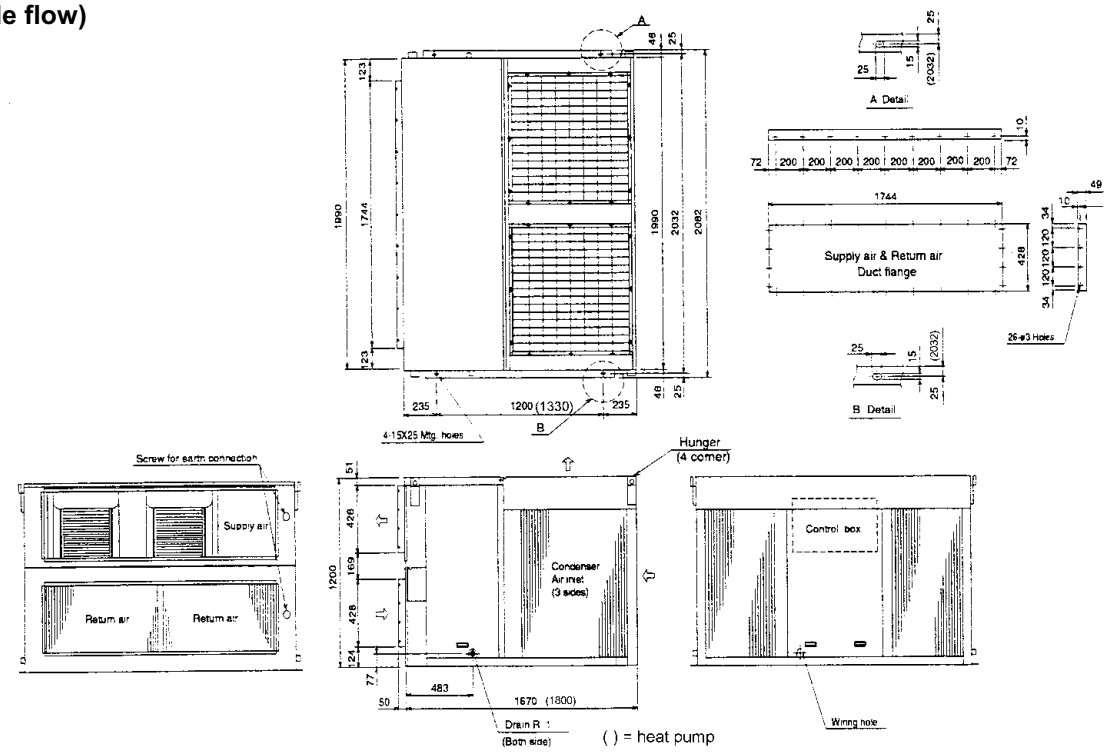
M(4)RT120A

(down flow)



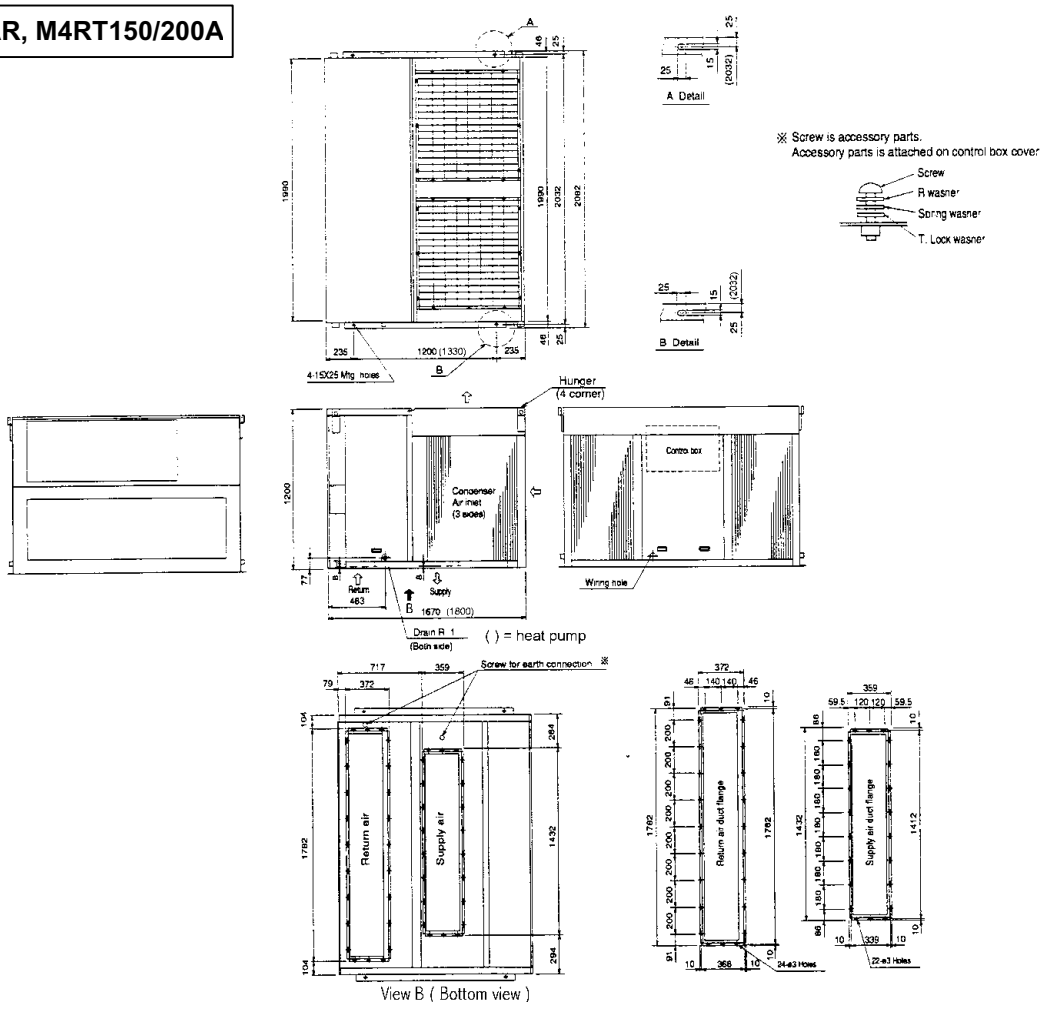
MRT150/200A/AR, M4RT150/200A

(side flow)

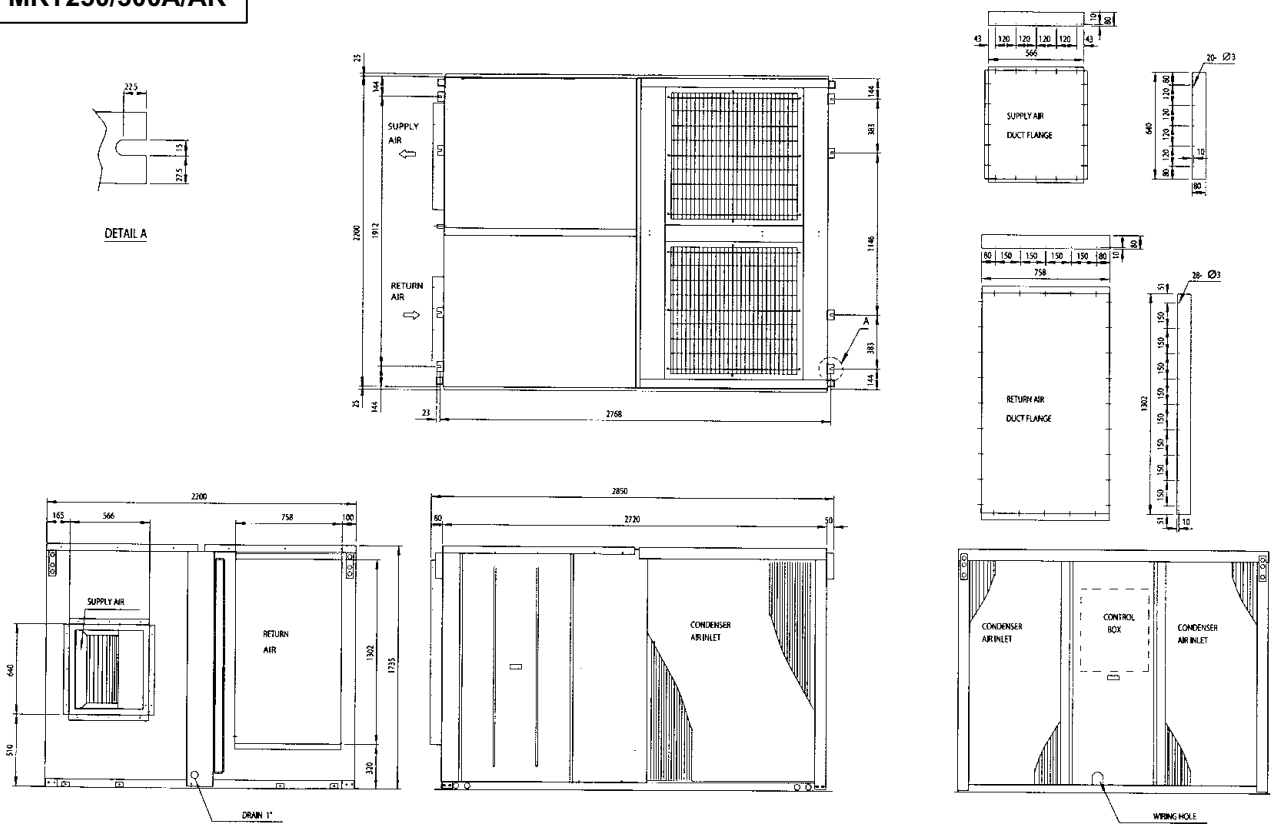


MRT150/200A/AR, M4RT150/200A

(down flow)

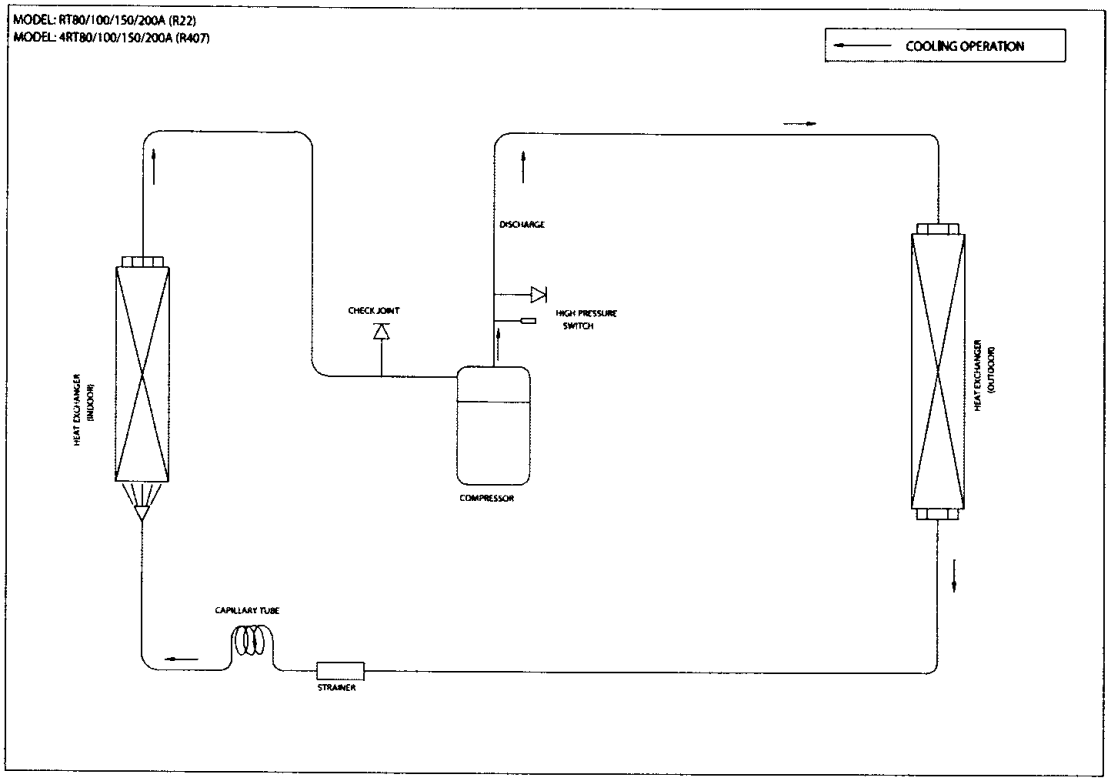


MRT250/300A/AR

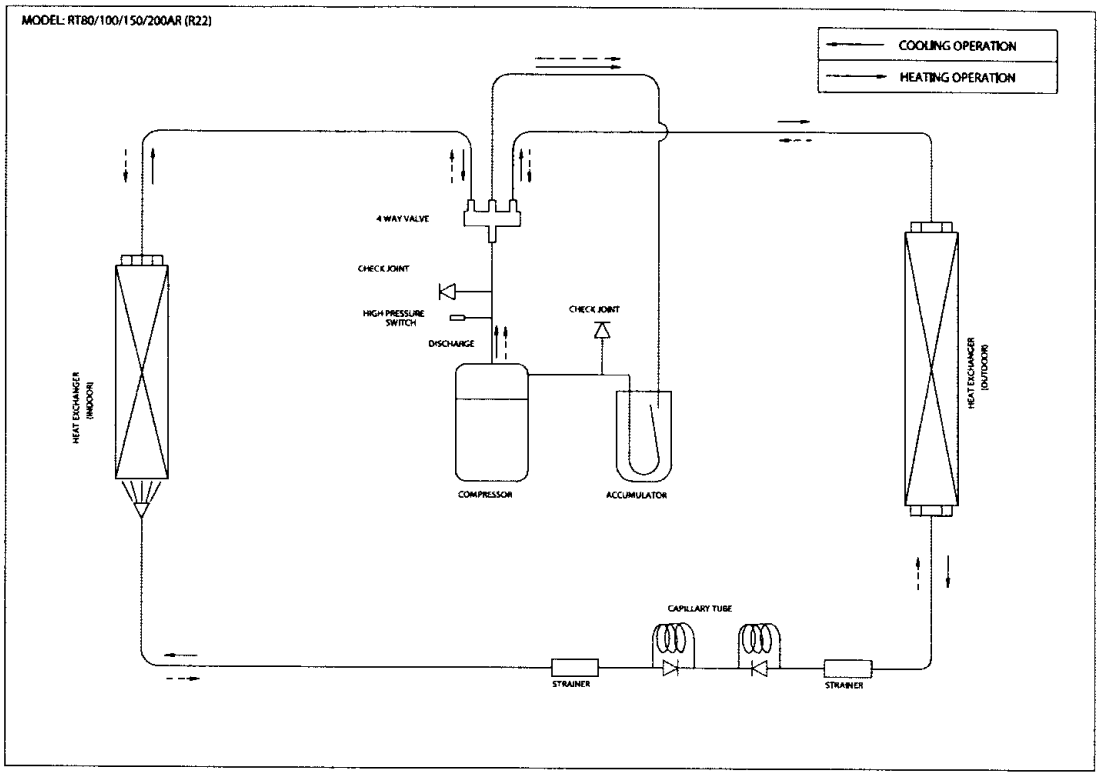


Schematic Diagram

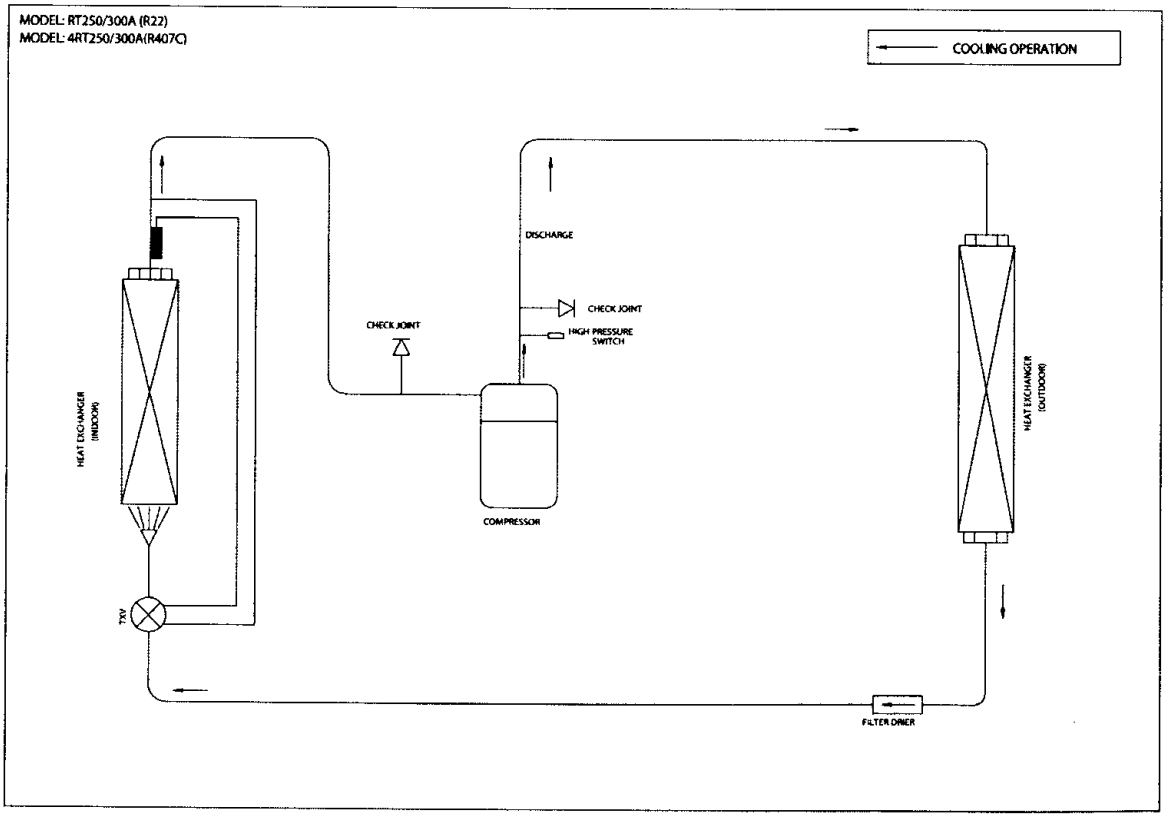
Model : MRT080/100/150/200A (R22)
M4RT080/100/150/200A (R407C)



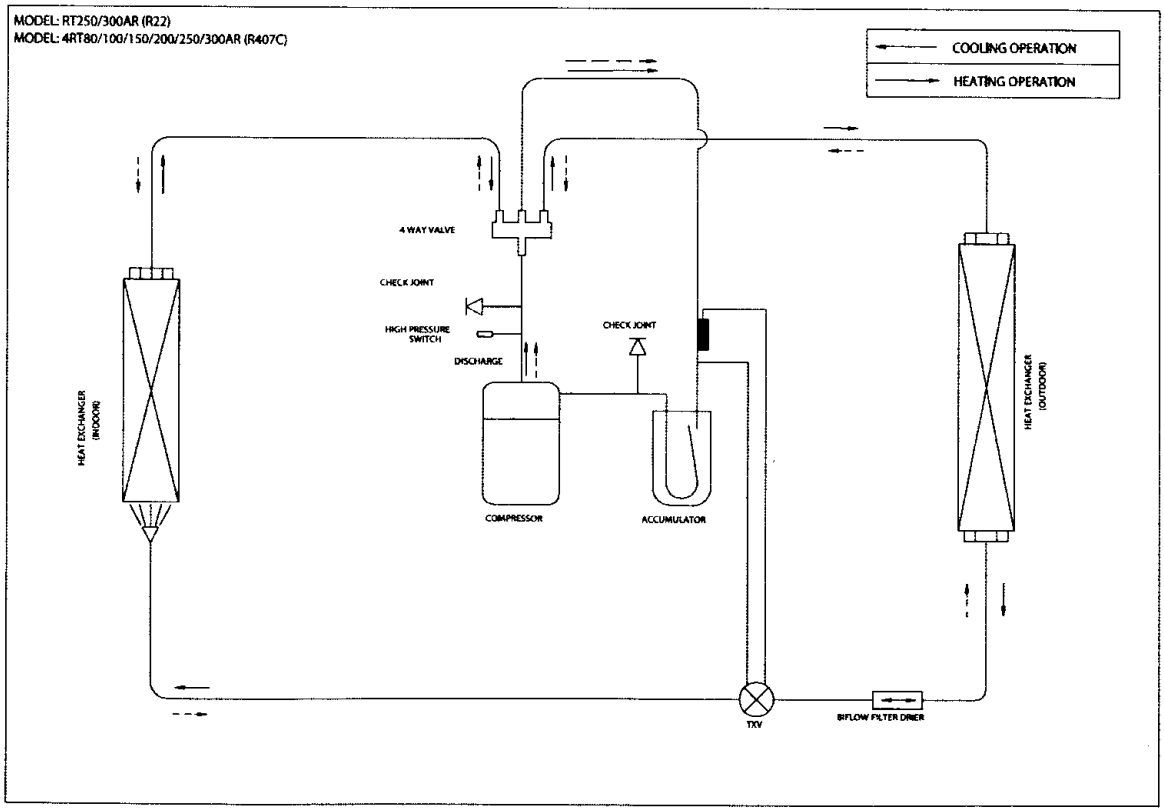
Model : MRT080/100/150/200AR (R22)



Model : MRT060/120A, MRT250/300A (R22)
M4RT060/120A, M4RT250/300A (R407C)

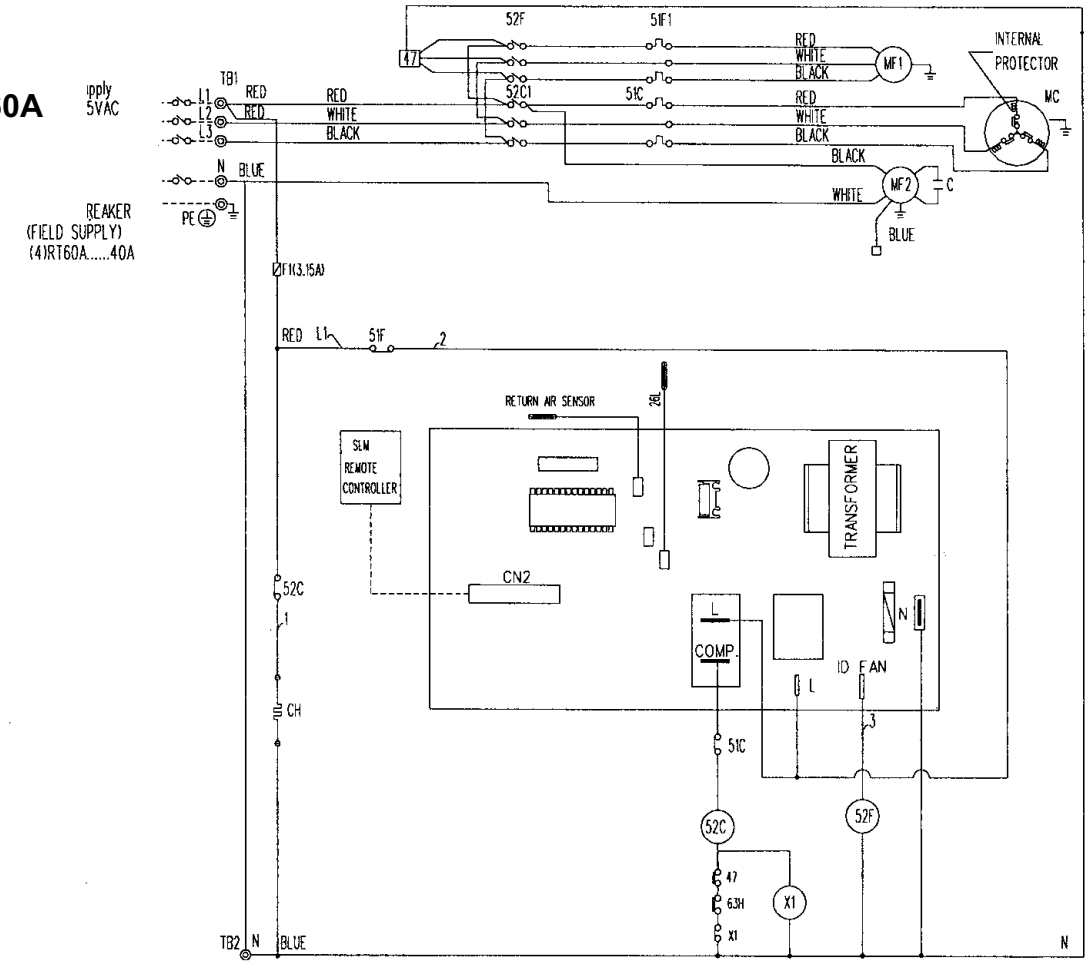


Model : MRT250/300AR (R22)
M4RT080/100/150/200/250/300AR (R407C)

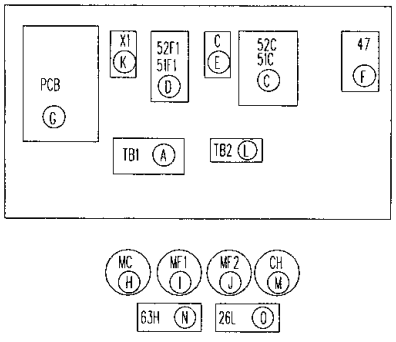


Wiring Diagrams

M(4)RT060A



ARRANGEMENT



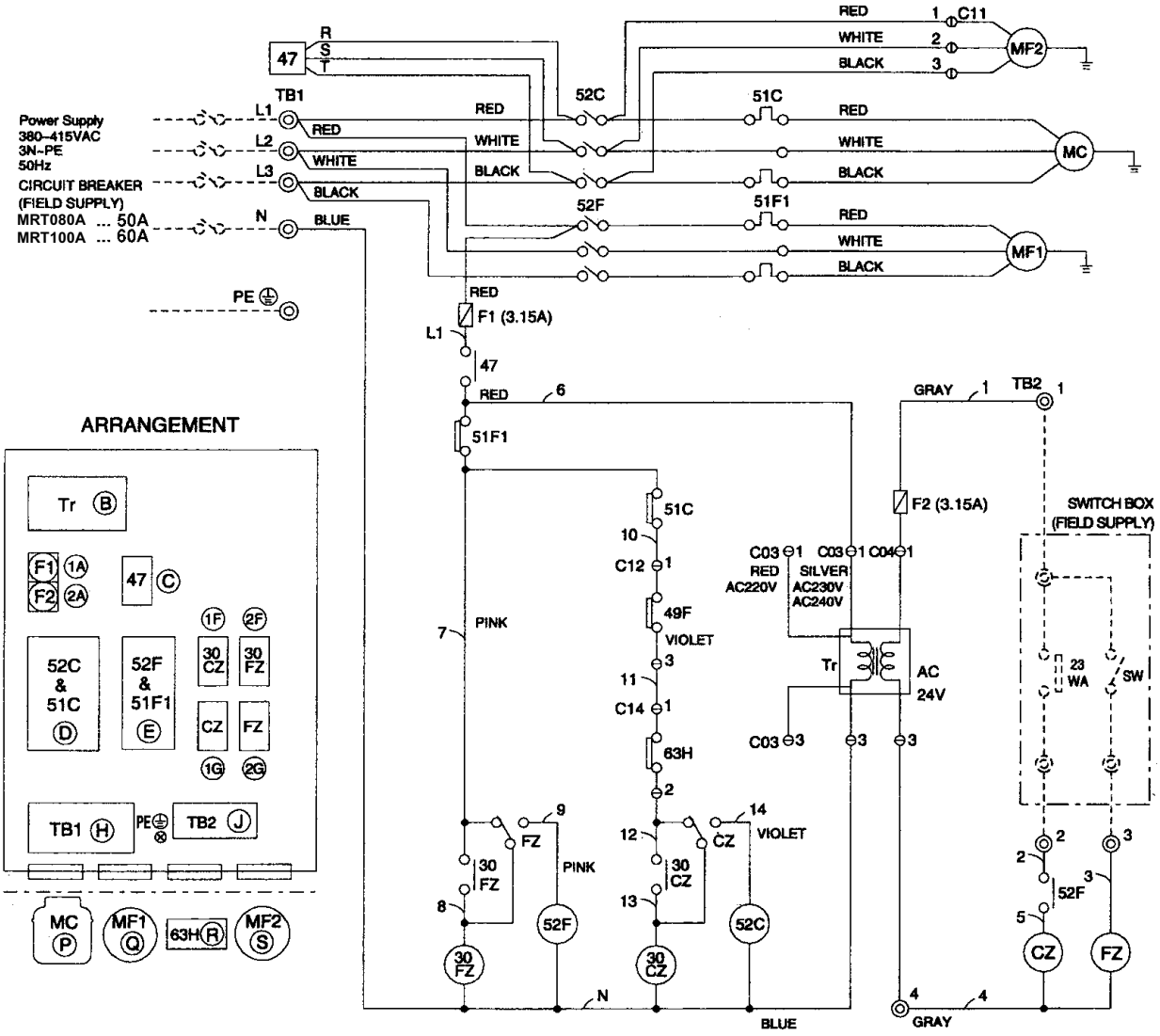
Symbol	Name
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contactor (compressor)
52F1	Contactor (fan I/D)
51C	Over current relay (compressor)
C	Capacitor (O/D fan motor)
TB1,2	Terminal block
51F	Over current relay (fan I/D)
63H	High-pressure switch
CH	Crankcase Heater
26L	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector/Discharge thermostat
X1	Auxiliary Relay (Self hold)
F1	Fuse (3.15A)

Caution,
1. To protect each Fan motor and Compressor from abnormal current, Over current relays <51C>, <51F> are installed.
Therefore, do not change factory set value of Over current relays.

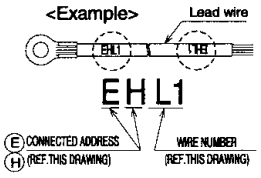
Note:
1. The dotted lines show field wiring.
2. The figure in the parentheses shows field supply parts.
3. Color of earth is yellow and green twisting.
4. If the power supply is 380AV, change the “C03” connector with silver color tape to red color tape.
5. Refer above example about wiring mark.

MRT080A
MRT100A
(MECHANICAL CONTROL)

Symbol	Name	Symbol	Name
MC	Compressor motor	63H	High-pressure switch
MF1	Fan motor (indoor)	FZ	Auxiliary relay (fan)
MF2	Fan motor (outdoor)	CZ	Auxiliary relay (compressor)
52C	Contactor (compressor)	30CZ,30FZ	Auxiliary relay (check)
52F	Contactor (fan I/D)	<SW>	Switch (on)
TB1,2	Terminal block	<23WA>	Thermostat (room temp.)
F1, F2	Fuse (3.15A)	47	Phase protector
Tr	Transformer	49F	Internal protector (fan O/D)
51C	Over current relay (compressor)	C03,04,11,12,14	Connector
51F1	Over current relay (fan I/D)		



Note :
1. The dotted lines show field wiring
2. The figure in the parentheses show field supply parts.
3. Color of earth wire is yellow and green twisting.
4. If the power supply is 380AV, change the “C03” connector with silver color tape to red color tape
5. Refer below example about wiring mark



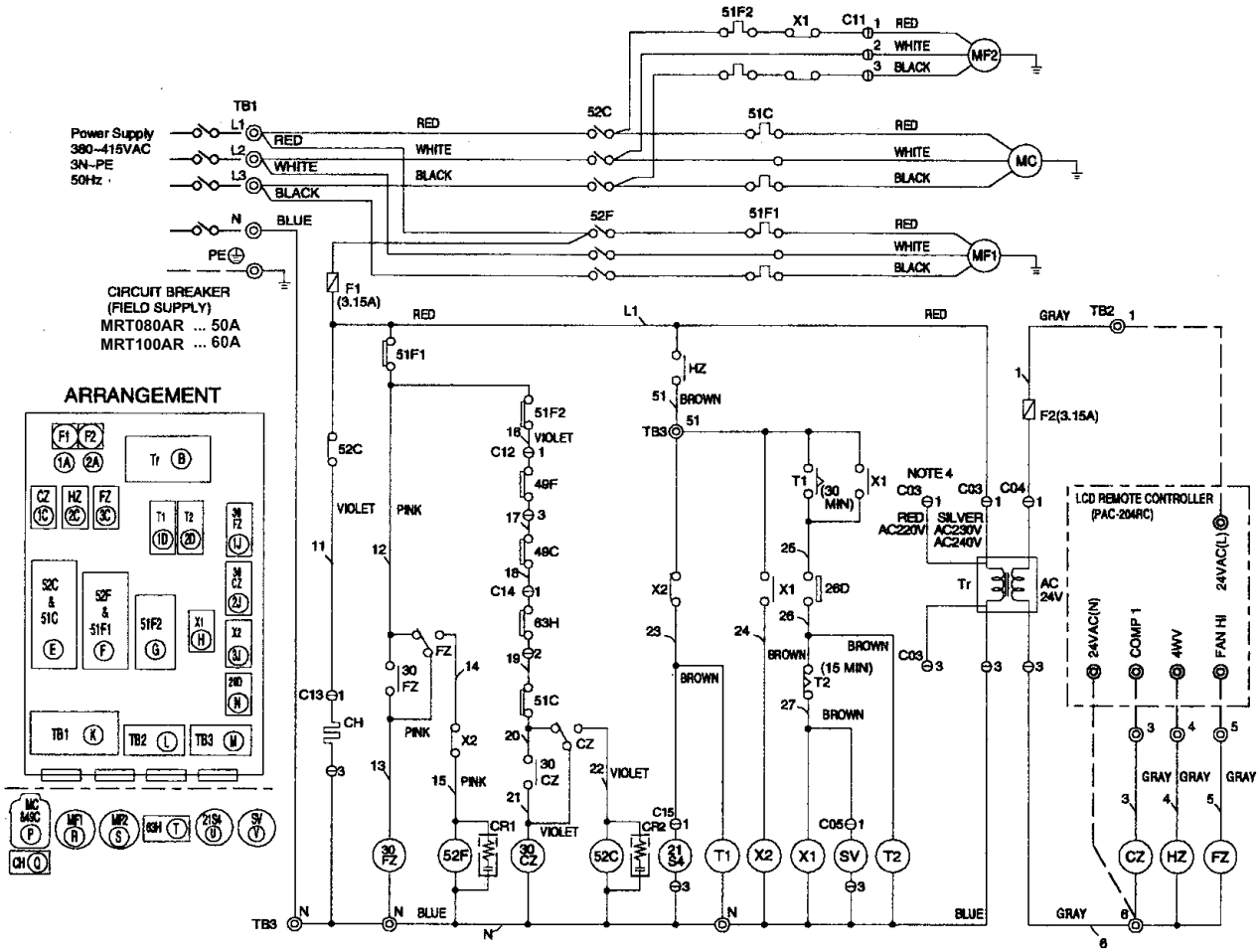
Caution,
1. To protect each Fan motor and Compressor from abnormal current, Over current relays <51C>, <51F1> are installed. Therefore, do not change factory set value of Over current relays.

Controller connection.

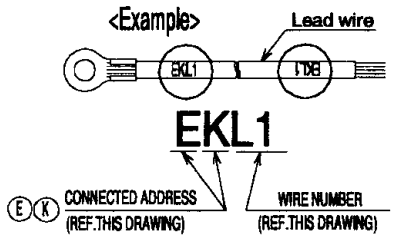
Symbol	No.	Function	PAC-204RC terminal no.
TB2	1	Power (Active)	24VAC(L)
	2	Cooling operation	COMP1
	3	Fan operation	FAN HI
	4	Power (Neutral)	24VAC(N)

MRT080AR
MRT100AR
(STANDARD : MECHANICAL CONTROL)

Symbol	Name	Symbol	Name	Symbol	Name
MC	Compressor motor	CR1,2	Surge killer	CH	Crankcase heater
MF1	Fan motor (indoor)	63H	High-pressure switch	T1,2	Timer (defrost)
MF2	Fan motor (outdoor)	FZ	Auxiliary relay (fan)	21S4	4-way valve
52C	Contactor (compressor)	CZ	Auxiliary relay (compressor)	C03,04,05,11-15	Connector
52F	Contactor (fan I/D)	30CZ,FZ	Auxiliary relay (check)	X1	Contactor (fan O/D)
TB1~3	Terminal block	<SW1>	Switch (Operation mode)	X2	Auxiliary relay (defrost)
F1, F2	Fuse (3.15A)	<SW2>	Switch (on)	26D	Thermostat (defrost)
Tr	Transformer	<23WA>	Thermostat (room temp.)	HZ	Auxiliary relay (4-way valve)
51C	Over current relay (compressor)	49F	Internal protector (fan O/D)	SV	Solenoid valve
51F1,2	Over current relay (fan I/D,O/D)	49C	Internal thermostat compressor		



Note : 1. The dotted lines show field wiring
2. The figure in the parentheses show field supply parts.
3. Color of earth wire is yellow and green twisting.
4. If the power supply is 380AV, change the “C03” connector with silver color tape to red color tape
5. Refer below example about wiring mark

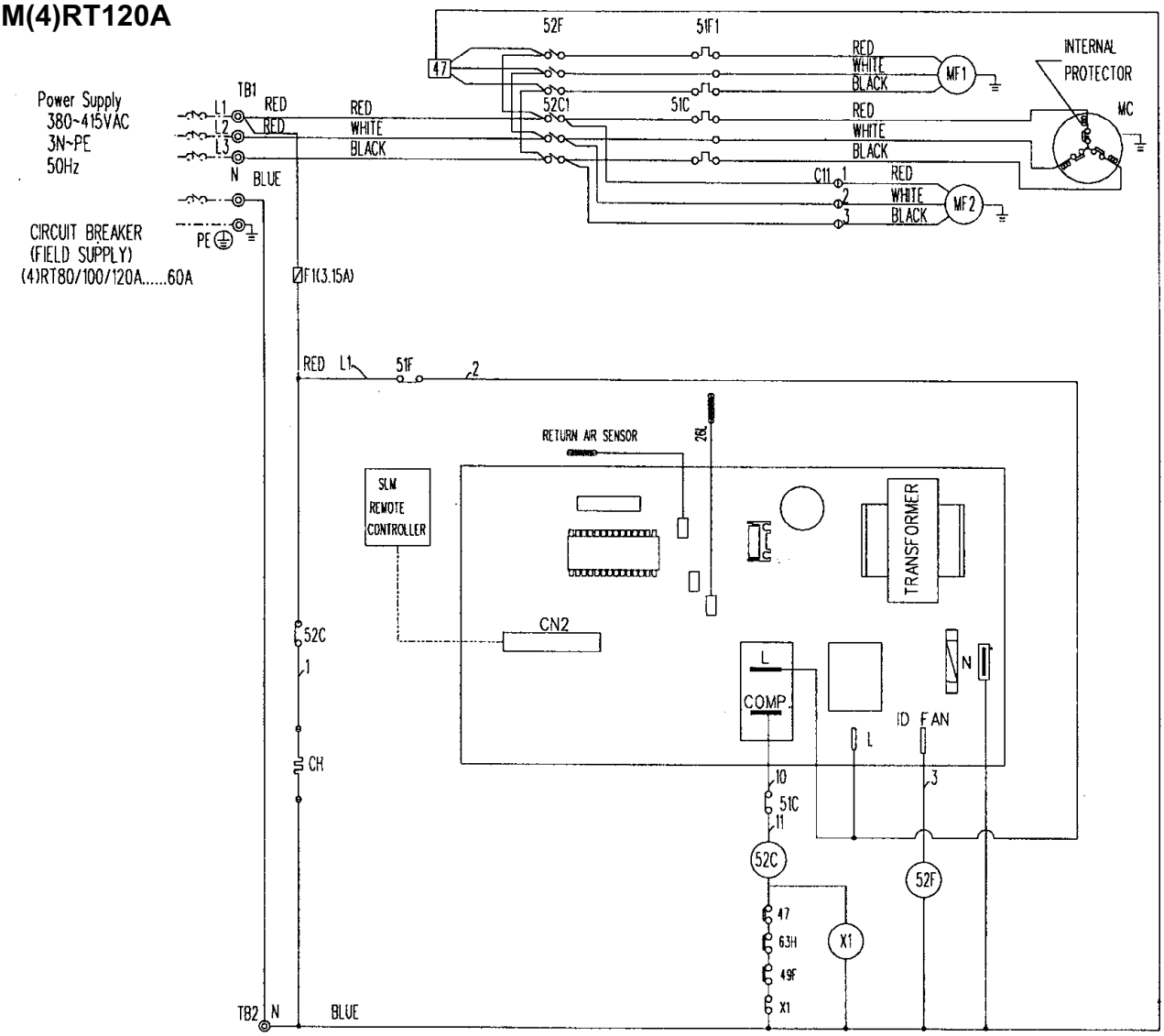


Caution,
1. To protect each Fan motor and Compressor from abnormal current, Over current relays <51C>, <51F1,2> are installed. Therefore, do not change factory set value of Over current relays.
2. Do not change factory set value of all timers.

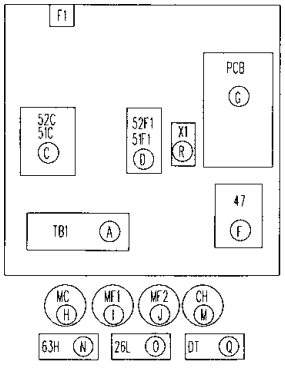
Controller connection.

Symbol	No.	Function	PAC-204RC terminal no.
TB2	1	Power (Active)	24VAC(L)
	3	Cooling or heating operation	COMP1
	4	Reversing valve for heating operation	4WV
	5	Fan operation	FAN HI
	6	Power (Neutral)	24VAC(N)

M(4)RT120A



ARRANGEMENT

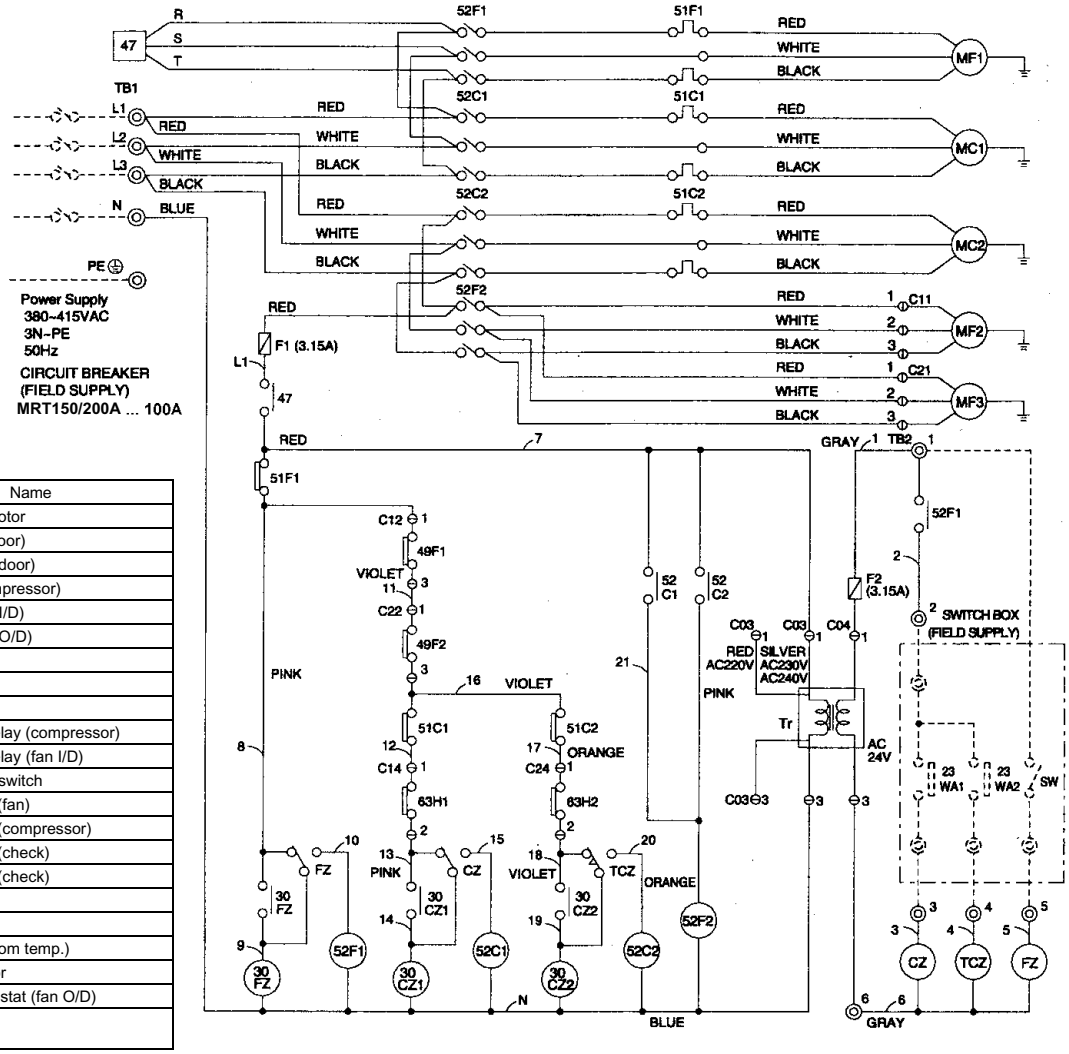


Symbol	Name
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contactor (compressor)
52F1	Contactor (fan I/D)
51C	Over current relay (compressor)
TB1	Terminal block
F1	Fuse (3.15A)
51F	Over current relay (fan I/D)
63H	High-pressure switch
CH	Crankcase Heater
26L	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector/Discharge thermostat
X1	Auxiliary Relay (Self hold)
49F	Internal Protector (OD fan)

Caution,
1. To protect each Fan motor and Compressor from abnormal current, Over current relays <51C>, <51F> are installed. Therefore, do not change factory set value of Over current relays.

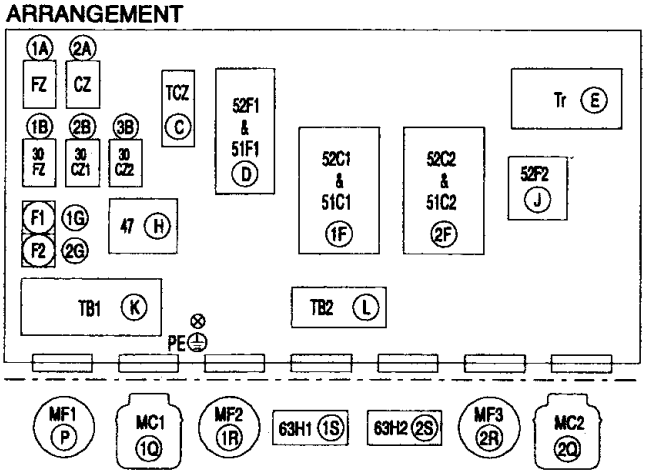
Note:
1. The dotted lines show field wiring.
2. The figure in the parentheses shows field supply parts.
3. Color of earth is yellow and green twisting.
4. If the power supply is 380AV, change the “C03” connector with silver color tape to red color tape.
5. Refer above example about wiring mark.

MRT150A
MRT200A
(MECHANICAL CONTROL)

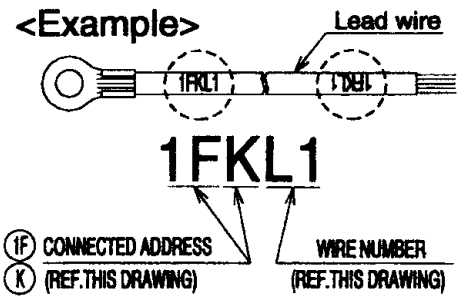


Symbol	Name
MC1,2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contactor (compressor)
52F1	Contactor (fan I/D)
52F2	Contactor (fan O/D)
TB1,2	Terminal block
F1, F2	Fuse (3.15A)
Tr	Transformer
51C1,2	Over current relay (compressor)
51F1	Over current relay (fan I/D)
63H1,2	High-pressure switch
FZ	Auxiliary relay (fan)
CZ	Auxiliary relay (compressor)
30CZ1,2	Auxiliary relay (check)
30FZ	Auxiliary relay (check)
TCZ	Timer (2 sec.)
<SW>	Switch (on)
<23WA1,2>	Thermostat (room temp.)
47	Phase protector
49F1,2	Internal thermostat (fan O/D)
C03,04,11,12,14,21 ,22,24	Connector

ARRANGEMENT



Note : 1. The dotted lines show field wiring
2. The figure in the parentheses show field supply parts.
3. Color of earth wire is yellow and green twisting.
4. If the power supply is 380AV, change the “C03” connector with silver color tape to red color tape
5. Refer below example about wiring mark



Controller connection.

Symbol	No.	Function	PAC-204RC terminal no.
TB2	1	Power (Active)	24VAC(L)
	3,4	Cooling operation	COMP1, 2
	5	Fan operation	FAN HI
	6	Power (Neutral)	24VAC(N)

Caution,
1. To protect each Fan motor and Compressor from abnormal current, Over current relays <51C1,2>, <51F1> are installed. Therefore, do not change factory set value of Over current relays.
2. This timer <TCZ> installed because the power supply breaker may operate if two compressors start at the same time.
3. Do no change the factory set value of Timer.

MRT150AR
MRT200AR
(STANDARD : MECHANICAL CONTROL)

Symbol	Name	Symbol	Name
MC1,2	Compressor motor	TCZ	Timer
MF1	Fan motor (indoor)	<SW1>	Switch (Operation mode)
MF2,3	Fan motor (outdoor)	<SW2>	Switch (on)
52C1,2	Contactor (compressor)	<23WA>	Thermostat (room temp.)
52F	Contactor (fan I/D)	49F1,2	Internal thermostat (fan O/D)
TB1~3	Terminal block	49C1,2	Internal thermostat (compressor)
F1, F2	Fuse (3.15A)	CH1,2	Crankcase heater
Tr	Transformer	X1,2	Contactor (defrost)
51C1,2	Over current relay (compressor)	X3,4	Auxiliary relay (defrost)
51F1	Over current relay (fan I/D)	21S41,2	4-way valve
51F2,3	Over current relay (fan O/D)	HZ	Auxiliary relay (4-way valve)
63H1-1, 1-2	High-pressure switch	T1~4	Timer (defrost)
63H2-1, 2-2	High-pressure switch (defrost)	26D1,2	Thermostat (defrost)
FZ	Auxiliary relay (fan)	C03,04 11~15, 18 21~25, 28	Connector
CZ	Auxiliary relay (compressor)		
30CZ1,2	Auxiliary relay (check)	CR1~3	Surge killer
30FZ	Auxiliary relay (check)		

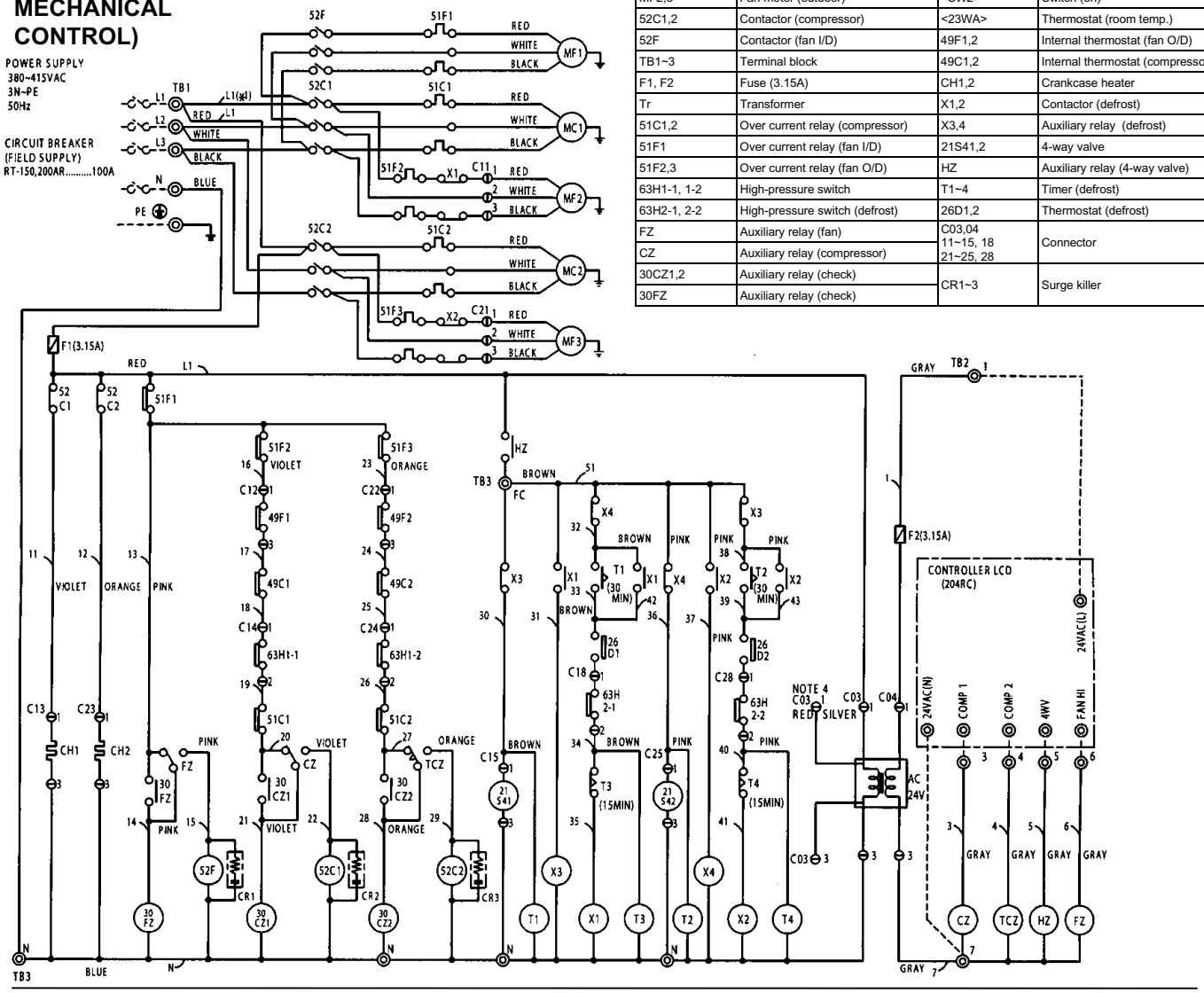


Fig. 1 Control box layout

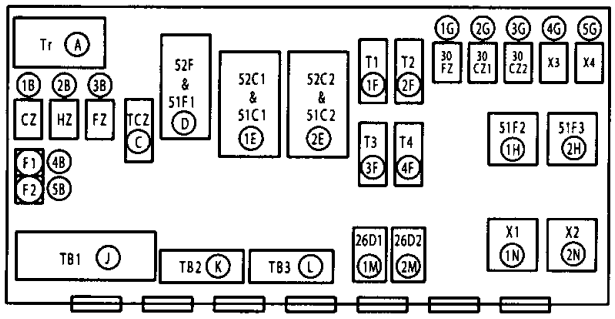
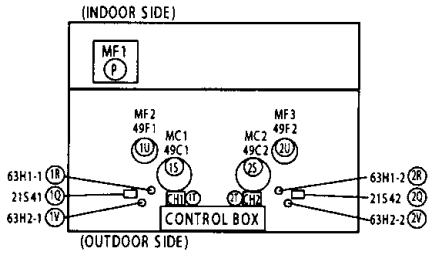
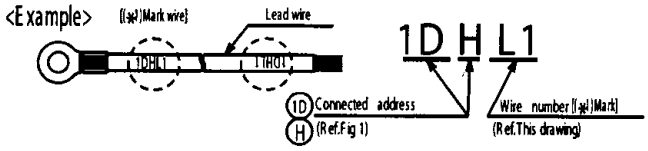


Fig 2 Unit internal layout



Caution,
1. To protect each Fan motor and Compressor from abnormal current, Over current relays <51C1,2>, <51F1~3> are installed. Therefore, do not change factory set value of Over current relays.
2. Do no change the factory set value of all timers.
3. This timer <TCZ> installed because the power supply breaker may operate if two compressors start at the same time.

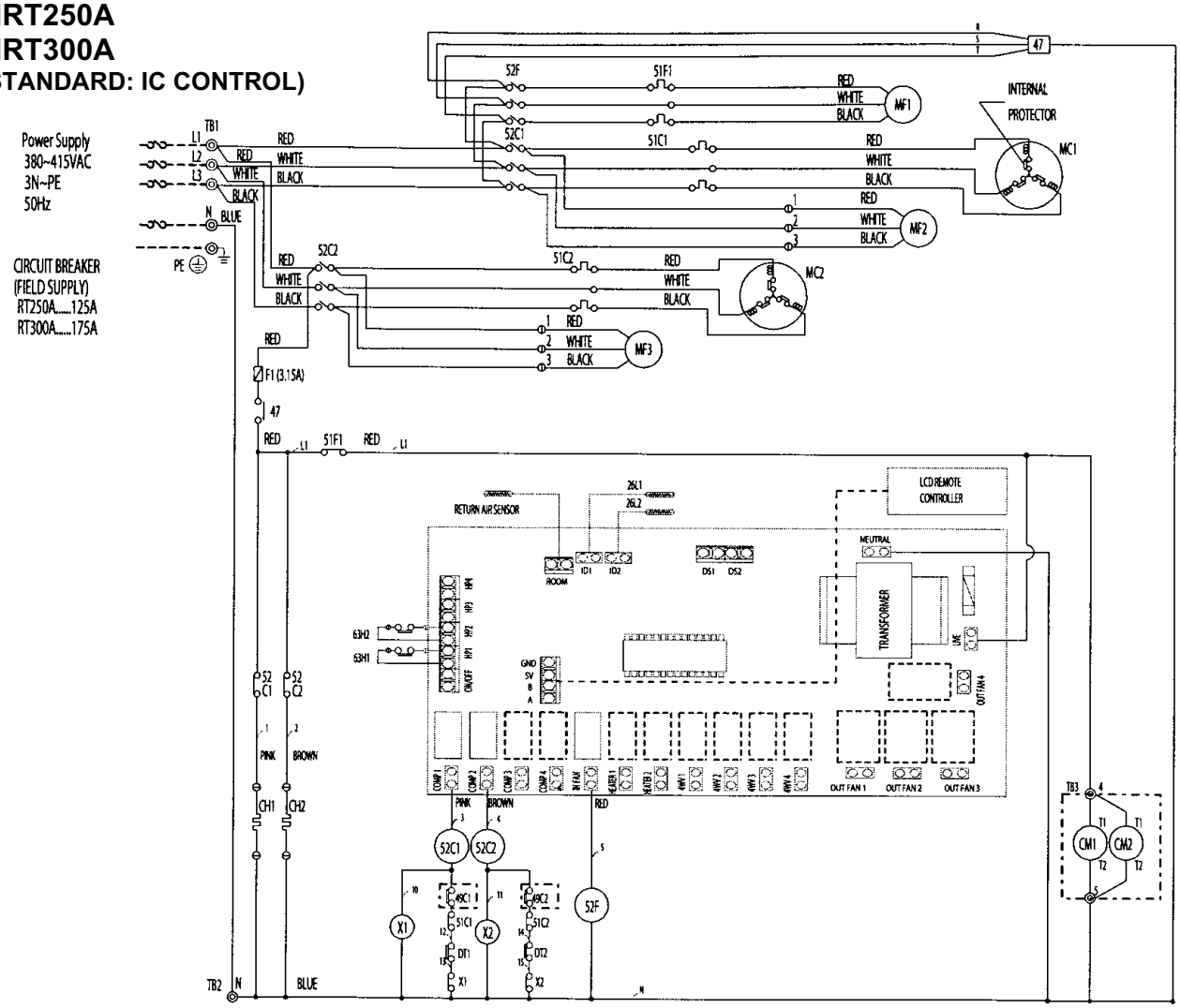
Note :
1. The dotted lines show field wiring
2. The figure in the parentheses show field supply parts.
3. Color of earth wire is yellow and green twisting.
4. If the power supply is 380VAC, change the “C03” connector with silver color tape to one with red color tape
5. Refer below example about wiring mark

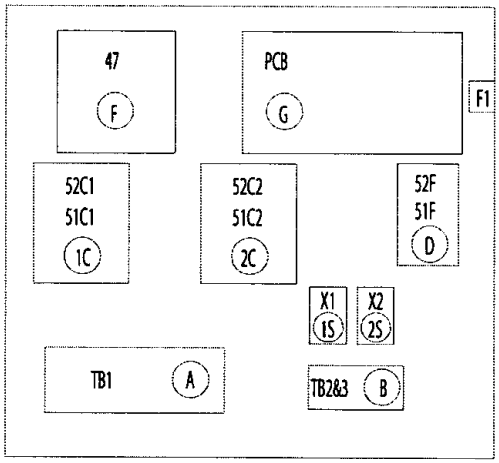


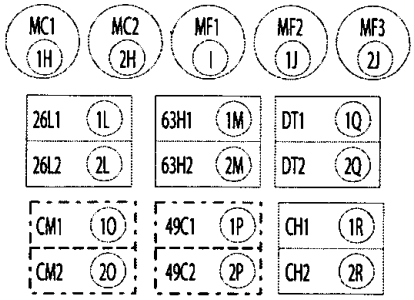
Controller connection.

Symbol	No.	Function	LCD-204RC terminal no.
TB2	1	Power (Active)	24VAC(L)
	3	Cooling or Heating operation	COMP1
	4	Cooling or Heating operation	COMP2
	5	Reversing valve for Heating operation	4WV
	6	Fan operation	FAN HI
	7	Power (Neutral)	24VAC(N)

MRT250A
MRT300A
(STANDARD: IC CONTROL)







Symbol	Name
MC1,2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contactor (compressor)
52F1	Contactor (fan I/D)
51C1,C2	Overload Protector (compressor)
TB1,2,3	Terminal block
F1	Fuse (3.15A)
51F	Overload Protector (fan I/D)
63H1,2	High-pressure switch
CH1,2	Crankcase heater
26L1,2	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector
DT1,2	Discharge Thermostat
X1,2	Auxilliary Relay (self hold)
49C1,C2	Compressor Internal Overload
CM1,2	Compressor Control Module

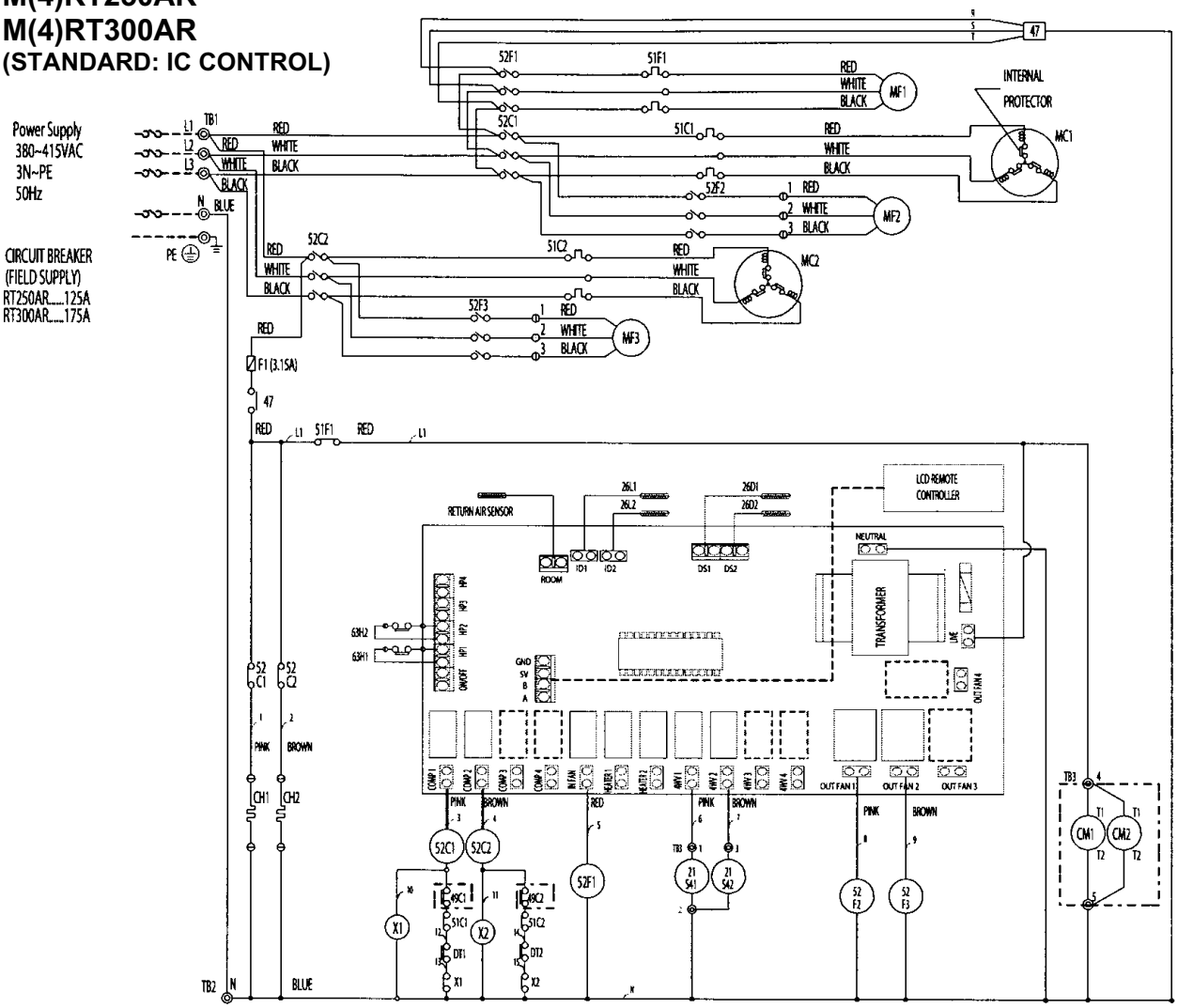
*ART300A only
*ART300A only

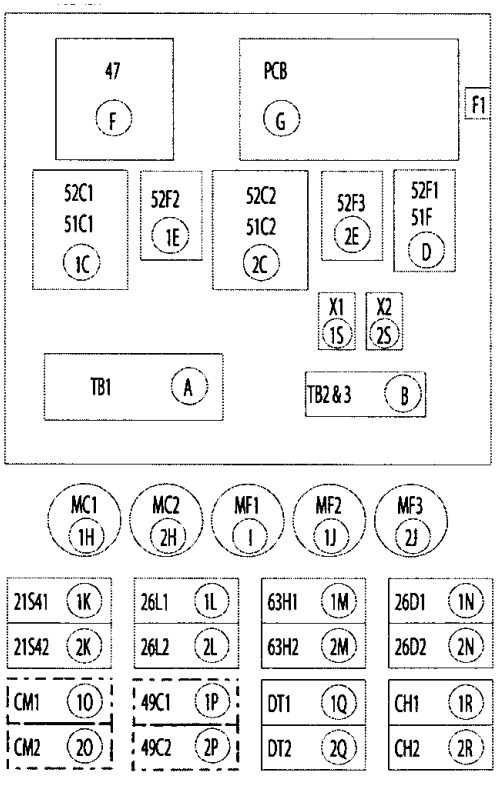
Caution,
1. To protect each Fan motor and Compressor from abnormal current, Overloadd protectors are installed. Therefore, do not change factory set value of the overload protector.

Note :
1. The dotted lines show field wiring .....
2. Color of earth wire is yellow and green twisting.
3. Specification subject to change without notice.
4. Each wire is addressed.
5. ⌐ ⌐ shows wiring for model RT300A only

In the case of ART250A : no wire connection at TB3(4) and (5), & 49C is replaced by single wire.

M(4)RT250AR
M(4)RT300AR
(STANDARD: IC CONTROL)





Symbol	Name
MC1,2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contactor (compressor)
52F1	Contactor (fan I/D)
52F2,3	Contactor (fan O/D)
51C1,C2	Overload Protector (compressor)
TB1,2,3	Terminal block
F1	Fuse (3.15A)
51F	Overload Protector (fan I/D)
63H1,2	High-pressure switch
CH1,2	Crankcase heater
21S41,2	4 Way valve
26D1,2	Sensor (defrost)
26L1,2	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector
DT1,2	Discharge Thermostat
X1,2	Auxilliary Relay (self hold)
49C1,C2	Compressor Internal Overload
CM1,2	Compressor Control Module

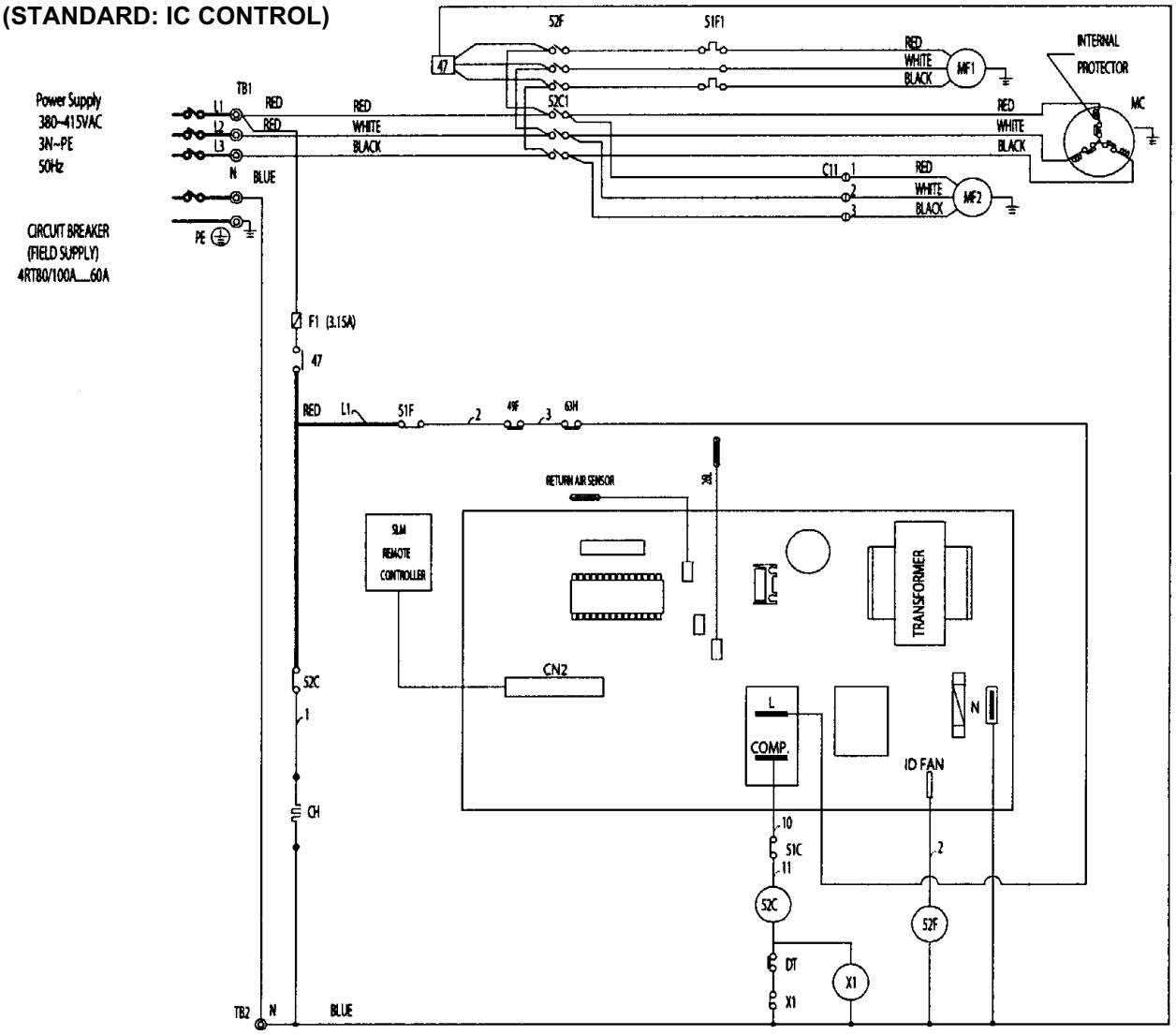
*ART300AR only
*ART300AR only

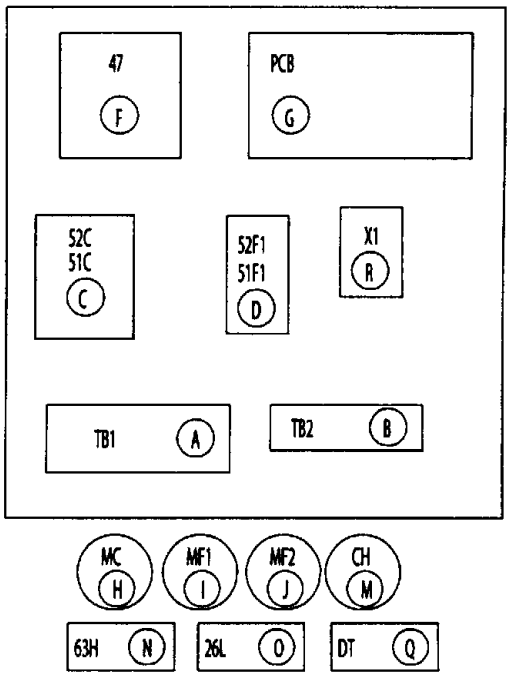
Caution,
1. To protect each Fan motor and Compressor from abnormal current, Overload protectors are installed. Therefore, do not change factory set value of the overload protector.

Note : 1. The dotted lines show field wiring .....
2. Color of earth wire is yellow and green twisting.
3. Specification subject to change without notice.
4. Each wire is addressed.
5. ┌ ─ ─ ─ ┐ shows wiring for model RT300AR only

In the case of ART250AR : no wire connection at TB3(4) and (5), & 49C is replaced by single wire.

M(4)RT080A
M(4)RT100A
(STANDARD: IC CONTROL)





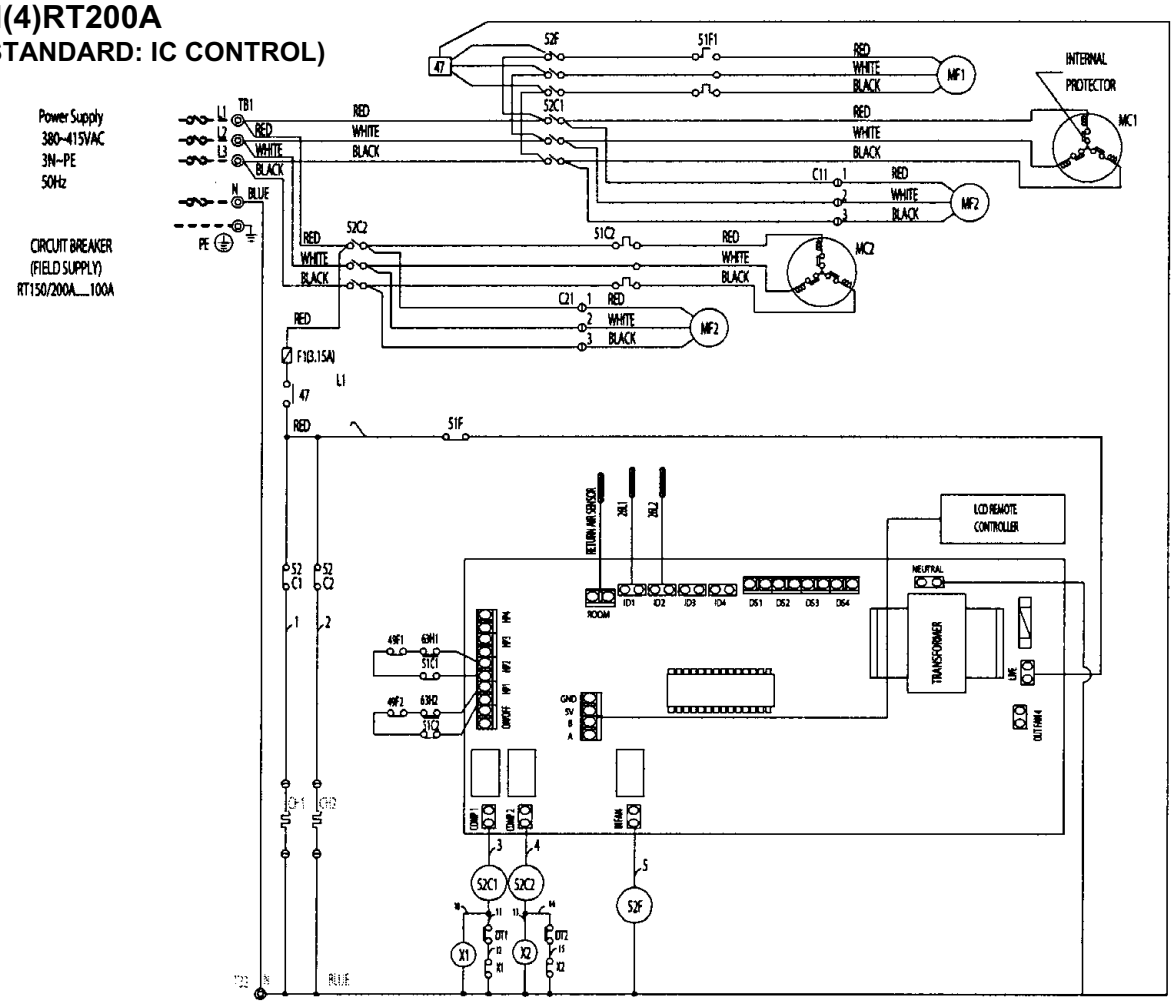
Symbol	Name
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contactor (compressor)
52F1	Contactor (fan I/D)
51C	Over current realy (comp)
TB1,2	Terminal block
F1	Fuse (3.15A)
51F	Over current relay (fan I/D)
63H	High-pressure switch
CH	Crankcase heater
26L	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector
DT	Discharge Thermostat
X1	Auxilliary Relay (self hold)
49F	Internal protector (O/D fan)

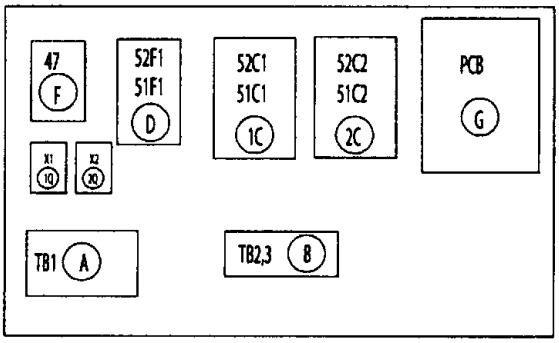
Caution,

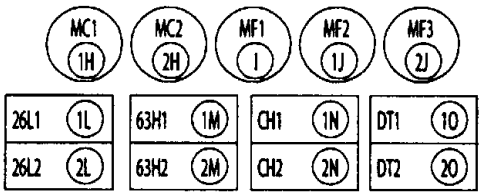
1. To protect each Fan motors and Compressors from abnormal current, overcurrent relays <51F>, <51C> are installed. Therefore, do not change factory set value of these overcurrent relays.

Note :
1. The dotted lines show field wiring.
2. The figure in the parenthesis show field supply parts.
3. Color of earth wire is yellow and green twisting.
4. Specification subject to change without notice.

M(4)RT150A
M(4)RT200A
(STANDARD: IC CONTROL)







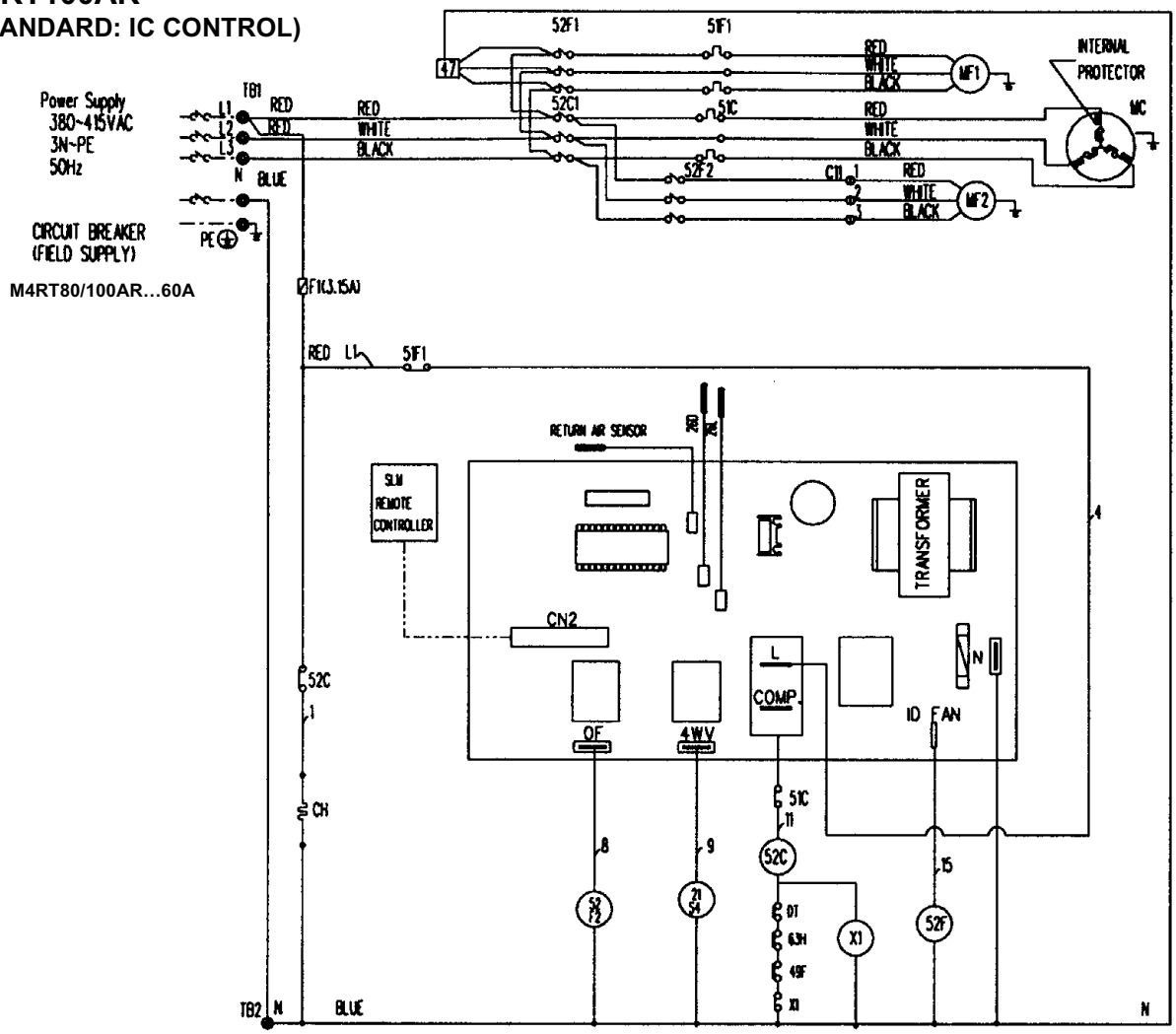
Symbol	Name
MC1, 2	Compressor motor
MF1	Fan motor (indoor)
MF2,3	Fan motor (outdoor)
52C1,2	Contactor (compressor)
52F	Contactor (fan I/D)
TB1,2,3	Terminal block
F1	Fuse (3.15A)
51C1,C2	Over current relay (COMP)
51F1	Over current relay (fan)
63H1,2	High-pressure switch
CH1,2	Crankcase heater
26L1,2	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector
DT1,2	Discharge Thermostat
49F1,2	Internal protector (O/D fan)
X1,2	Auxilliary Relay (self hold)

Caution,

1. To protect each Fan motors and Compressors from abnormal current, overcurrent relays <51F1>, <52C1> and <52C2> are installed. Therefore, do not change factory set value of these overcurrent relays.

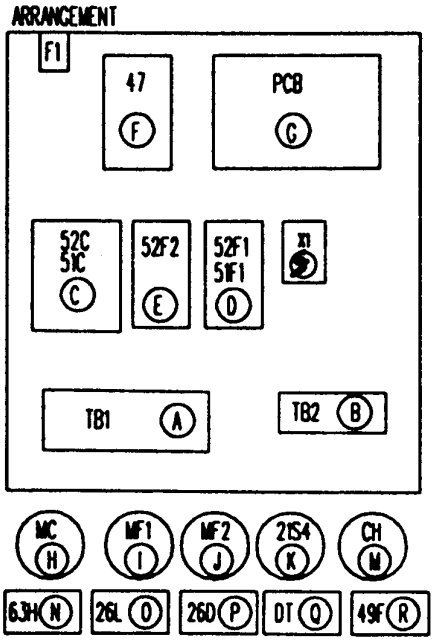
Note :
1. The dotted lines show field wiring.
2. The figure in the parenthesis show field supply parts.
3. Color of earth wire is yellow and green twisting.
4. Specification subject to change without notice.

M4RT080AR
M4RT100AR
(STANDARD: IC CONTROL)



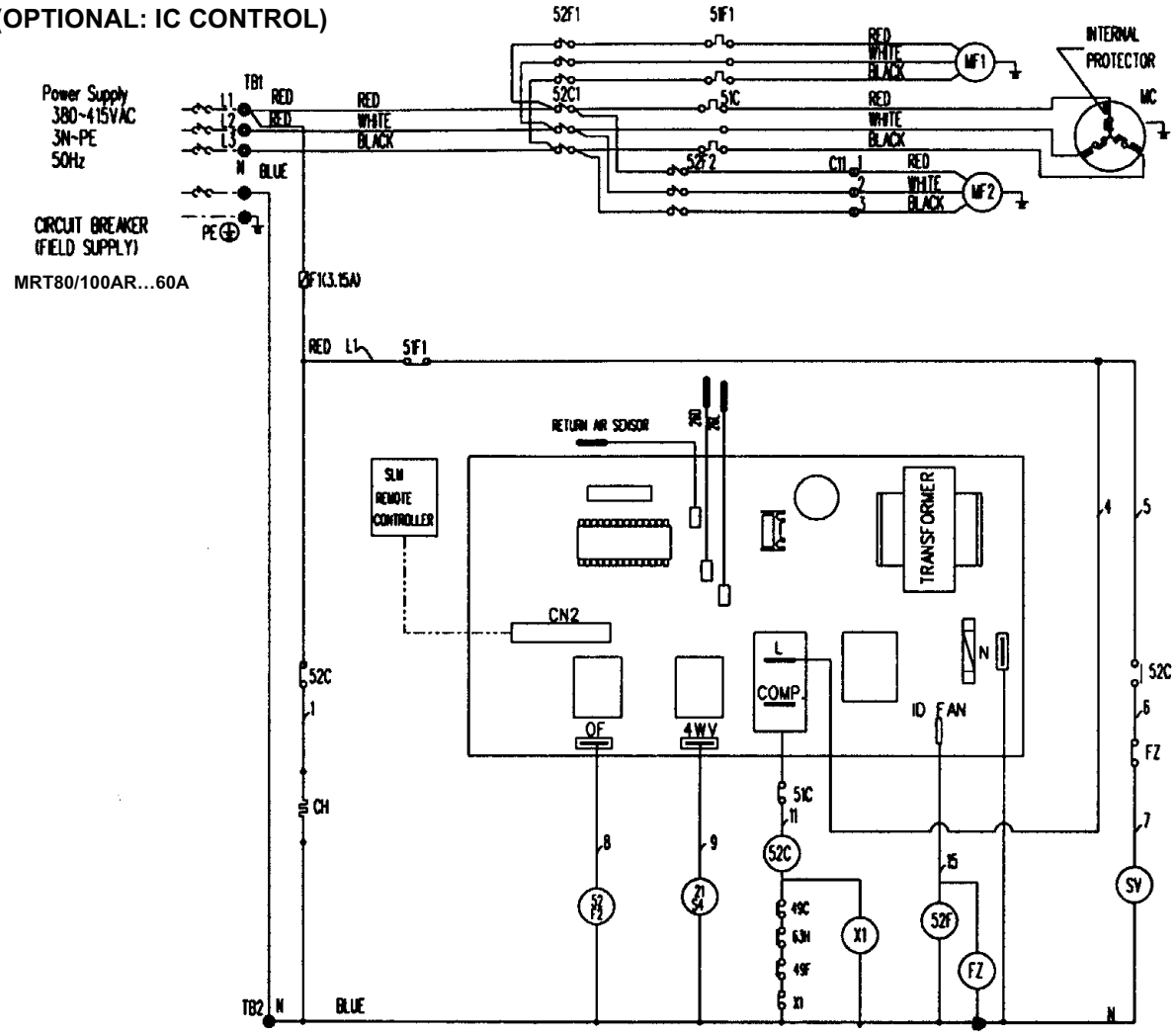
Note :
1. The dotted lines show field wiring.
2. The figure in the parenthesis show field supply parts.
3. Color of earth wire is yellow and green twisting.
4. Specification subject to change without notice.

Caution,
1. To protect each Fan motors and Compressors from abnormal current, overcurrent relays <51F1>, <52C> are installed.
Therefore, do not change factory set value of these overcurrent relays.



Symbol	Name
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contactor (compressor)
52F1	Contactor (fan I/D)
52F2	Contactor (fan O/D)
51C	Over current relay (comp)
TB1,2	Terminal block
F1	Fuse (3.15A)
51F1	Over current relay (fan I/D)
63H	High-pressure switch
CH	Crankcase heater
21S4	4-Way valve
26D	Sensor (defrost)
26L	Sensor (freeze protection)
PCB	Printed Circuit Board
47	Phase Protector
X1	Auxilliary Relay (self hold)
49F	Internal protector (O/D fan)
DT	Discharge Thermostat

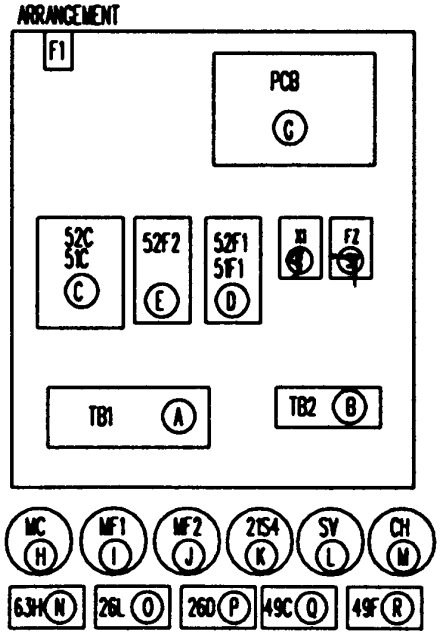
MRT080AR
MRT100AR
(OPTIONAL: IC CONTROL)



Note :
1. The dotted lines show field wiring.
2. The figure in the parenthesis show field supply parts.
3. Color of earth wire is yellow and green twisting.
4. Specification subject to change without notice.

Caution,
1. To protect each Fan motors and Compressors from abnormal current, overcurrent relays <51F1>, <52C> are installed.
   Therefore, do not change factory set value of these overcurrent relays.

ARRANGEMENT



Symbol	Name
MC	Compressor motor
MF1	Fan motor (indoor)
MF2	Fan motor (outdoor)
52C	Contactor (compressor)
52F1	Contactor (fan I/D)
52F2	Contactor (fan O/D)
51C	Over current relay (comp)
TB1,2	Terminal block
F1	Fuse (3.15A)
51F1	Over current relay (fan I/D)
63H	High-pressure switch
CH	Crankcase heater
21S4	4-Way valve
26D	Sensor (defrost)
26L	Sensor (freeze protection)
PCB	Printed Circuit Board
49C	Internal protector (Compressor)
49F	Internal protector (O/D fan)
X1	Auxilliary Relay (Self hold)
FZ	Auxilliary Relay (Defrost)

Installation

All series of air conditioners are designed for outdoor installations and are to be placed on a slab or rooftop, however if the air conditioner is to be installed in a plant room application, please contact your equipment supplier prior to installation.
Access for both service and installation must be provided to the compressors, control wiring and fans as shown below.

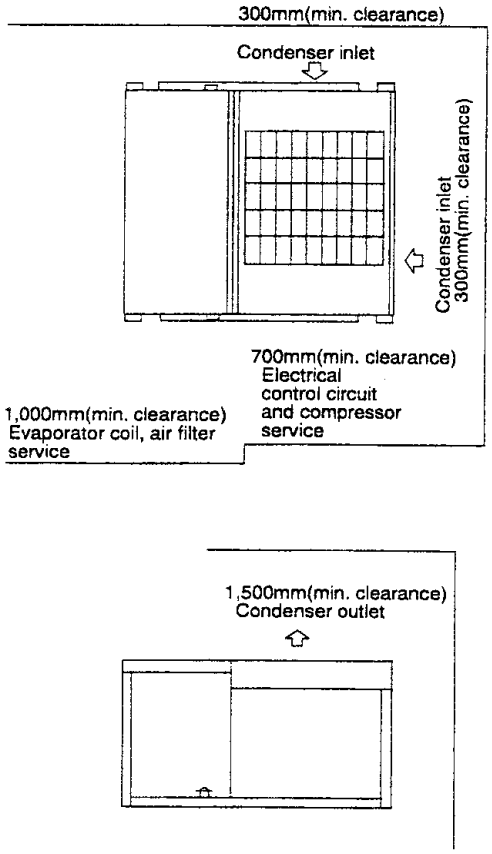
1. Space Required Around Units.

(1) Care must be taken to prevent recirculation air. To stabilize compressor, condensing pressure, it is recommended that wherever possible the condenser air inlet side be faced away from prevailing winds.

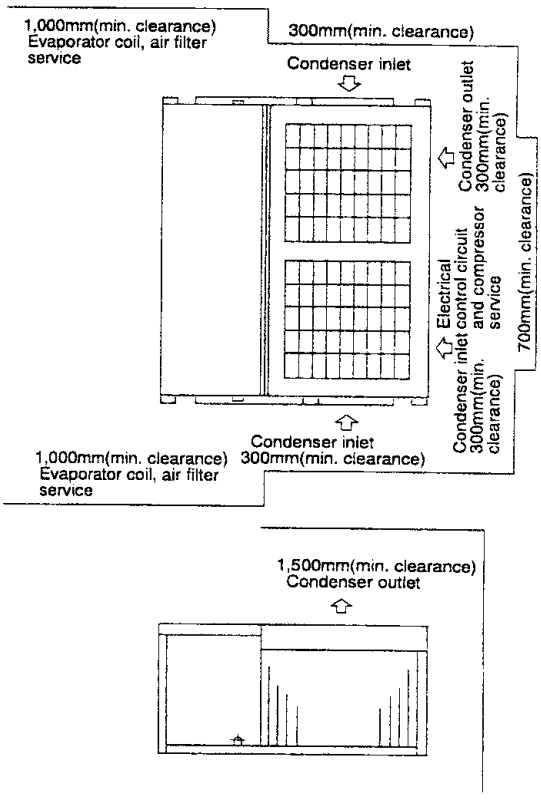
(2) For rooftop installation, the type of mounting base depends on the roof construction.
A built-up roof may not support the weight of the unit and so it may be necessary to support the unit by adding structural members below it.

(3) The units are equipped with hoisting plates for rigging and hoisting of the unit.
The hoisting plates are located on the top of the unit. When hoisting the unit with a crane, spreader bars must be used to prevent damage to side panels by the supporting cables.

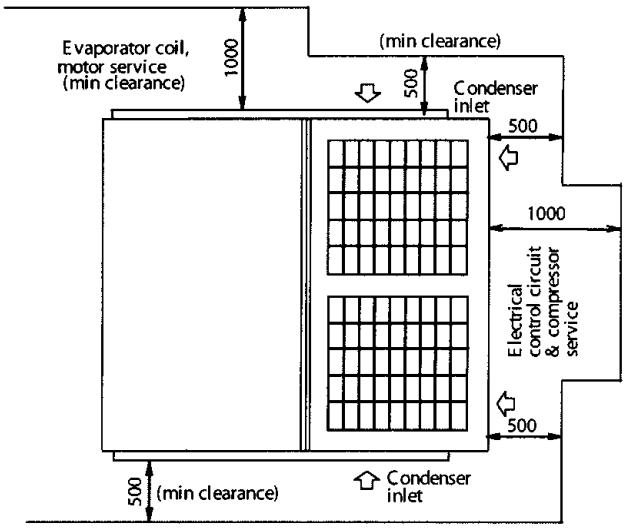
MRT080/100A/AR

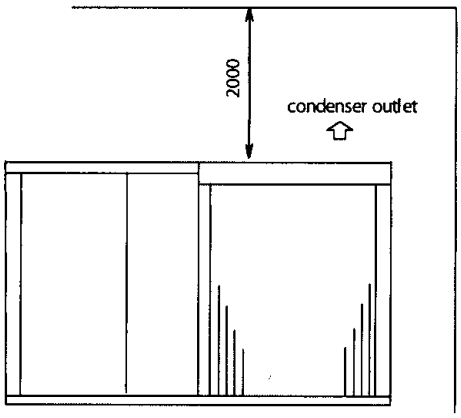


MRT150/200A/AR



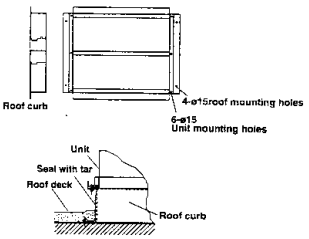
MRT250/300 A/AR





2. Installation Of The Unit.

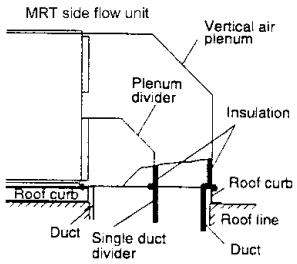
(1) The figure shows the use of the roof curb available for mounting these units.
(2) The curb should be sealed and fixed to the roof by weather stripping. A suggested means of sealing the unit and roof curb is shown below.



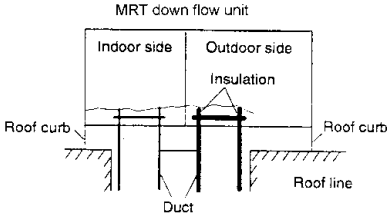
3. Duct Construction.

(1) Series MRT side flow units are equipped with horizontal supply and return air openings. Duct connection to the unit should be made with duct flanges and secured directly to the air openings with flexible duct connectors to avoid normal noise transmission.
(2) For vertical air supply, a field supply plenum should be used. The figure below shows the recommended method for duct connection.
(3) Series MRT down flow units are equipped with vertical supply and return air openings. Duct connection to the unit should be made with duct flanges to avoid normal noise transmission.
(4) To prevent air leakage, all duct seams should be taped.
Ducts run in air spaces that are not air-conditioned must be insulated and provided with a vapor barrier.
Ducts exposed to the outside must be weather proofed. For quiet operation, we recommend that the insulation on the supply duct be placed inside, lining the duct.
(5) Where ducts from the outside enter a building, the duct openings in the building should be sealed with weather stripping to prevent rain, duct, sand, etc. from entering the building.
(6) Fans will not accept any external resistance to airflow and what provision is available if ductwork is to be fitted to the external fans.
(7) Correctly sized filters must be fitted and there is no provision within the unit, however the filters may be installed in the return air.
(8) Duct earth wiring must be connected, refer to term 4 (outline drawing) about earth point.
In case of down flow, we must use accessory screw attached on control box cover.

Duct connection with a vertical air plenum at MRT side flow unit

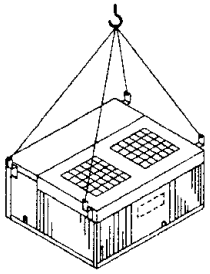


Duct connection at MRT down flow unit



4. Lifting Method.

When the unit is to be lifted and moved, attach ropes to the suspension plates (4 p.c.s) provided on the top of the unit.
When the unit is lifted, it is center of gravity tends to shift the unit one side and so balance, such as that in the figure below, should be attained. The angles at which the ropes suspend the unit should be at least 60° at the compressor end and at least 45 ° at the condenser end.
Care should be taken to avoid contact with the main unit while carrying.

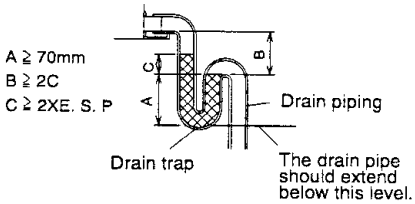


Hook (as directly aligned over the center of gravity as possible

5. Drain Piping.

(1) The condensate drain fitting (R 1) is provided. The drain pipe can be led out at the right or left side. Under standard specifications, it is led out at the left side and the right side is covered.
(2) The drain pipe must be provided with a trap on the outside of the unit and also installed at an incline for proper drainage, as shown below.
(3) To prevent condensate formation and leakage, provide the drain pipe with insulation to safeguard against sweating.
(4) Upon completion of the piping work, check that there is no leakage and that the water drains off properly.

The drain piping should have a drain trap.



Note: ESP = External Static Pressure
Drain trap for condensate

6. Refrigerant Charge

An additional charge is unnecessary.
The table below shows the amount of the charge when the factory is shipped.

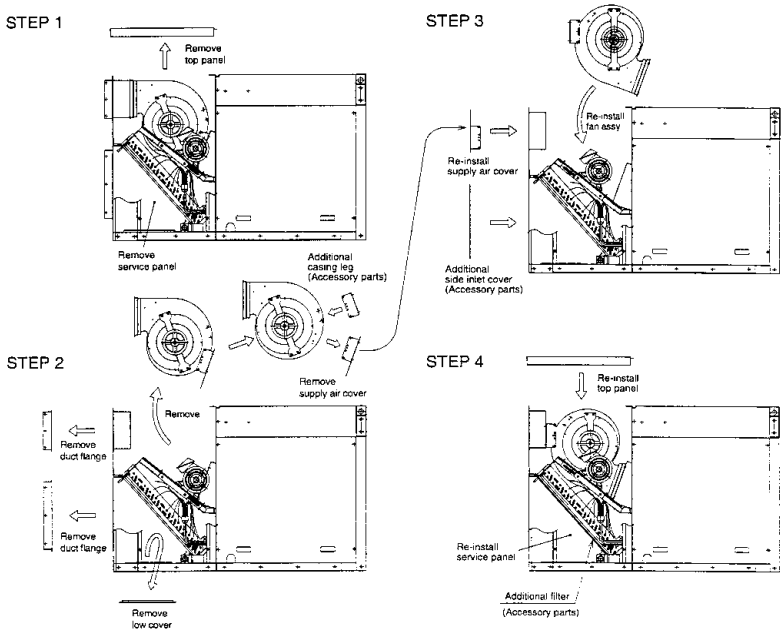
	MRT060A	MRT080A	MRT100A	MRT120A	MRT150A	MRT200A	MRT250A	MRT300A
Refrigerant charge per circuit (kg)	5.2	4.0	5.9	6.2	2 x 4.5	2 x 5.9	2 x 10.5	2 x 10.4
	MRT080AR	MRT100AR	MRT150AR	MRT200AR	MRT250AR	MRT300AR		
Refrigerant charge per circuit (kg)	4.7	5.6	2 x 4.7	2 x 5.6	2 x 10.0	2 x 9.6		

	M4RT060A	M4RT080A	M4RT100A	M4RT120A	M4RT150A	M4RT200A	M4RT250A	M4RT300A
Refrigerant charge per circuit (kg)	4.6	4.6	5.9	5.6	2 x 3.9	2 x 4.2	2 x 9.6	2 x 10.4
	M4RT080AR	M4RT100AR	M4RT150AR	M4RT200AR	M4RT250AR	M4RT300AR		
Refrigerant charge per circuit (kg)	4.2	6.0	2 x 5.0	2 x 5.8	2 x 9.4	2 x 9.6		

7. Reconstruction method. (from side flow to down flow)

(FOR MRT080 – 200A/AR ONLY)

Series MRT side flow units are able to modified to down flow at field.
But you need to prepare some accessory parts.
If you will modify to down flow, you prepare accessory parts and reconstruct below method.



Special Precautions For R407C

Special Precautions When Dealing With Refrigerant R407c Unit

1) What is new refrigerant R407C?

R407C is a zeotropic refrigerant mixture which has Zero Ozone Depletion Potential (ODP = 0) and thus conformed to the Montreal Protocol regulation. It requires Polyol-ester oil (POE) oil for its compressor's lubricant. Its refrigerant capacity and performance are about the same as the refrigerant R22.

2) Components

Mixture weight composition R32(23%), R125(25%), R134a(52%)

3) Characteristic

- R407C liquid and vapor components have different compositions when the fluid evaporates or condenses. Hence, when leak occurs and only vapor leaks out, the composition of the refrigerant mixture left in the system will change and subsequently affect the system performance. **DO NOT** add new refrigerant to leaked system. It is recommended that the system should be evacuated thoroughly before recharging with R407C.
- When refrigerant R407C is used, the composition will differ depending on whether it is in gaseous or liquid phase. Hence when charging R407C, ensure that only liquid is being withdrawn from the cylinder or can. This is to make certain that only original composition of R407C is being charged into the system.
- POE oil is used as lubricant for R407C compressor, which is different from the mineral oil used for R22 compressor. Extra precaution must be taken not to expose the R407C system too long to moist air.

4) Check List Before Installation/Servicing

- Tubing
  Refrigerant R407C is more easily affected by dust of moisture compared with R22, make sure to temporarily cover the ends of the tubing prior to installation
- Compressor oil
  No additional charge of compressor oil is permitted.
- Refrigerant
  No other refrigerant other that R407C
- Tools
  Tools specifically for R407C only (must not be used for R22 or other refrigerant)
  i) Manifold gauge and charging hose
  ii) Gas leak detector
  iii) Refrigerant cylinder/charging cylinder
  iv) Vacuum pump c/w adapter
  v) Flare tools
  vi) Refrigerant recovery machine

5) Handling And Installation Guidelines

Like R22 system, the handling and installation of R407C system are closely similar. All precautionary measures; such as ensuring no moisture, no dirt or chips in the system, clean brazing using nitrogen, and thorough leak check and vacuuming are equally important requirements. However, due to zeotropic nature of R407C and its hydroscopic POE oil, additional precautions must be taken to ensure optimum and trouble-free system operation.

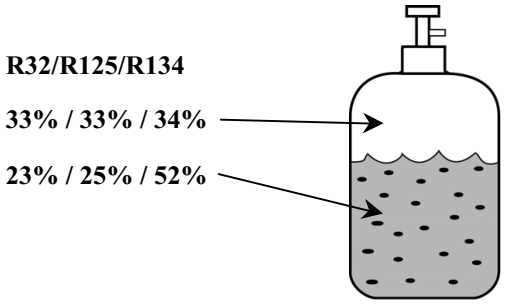
a) Filter-dryer must be installed along the liquid line for all R407C air conditioners. This is to minimise the contamination of moisture and dirt in the refrigerant system. Filter-dryer must be of molecular sieve type. For a heat-pump system, install a two-way flow filter dryer along the liquid line.

b) During installation or servicing, avoid prolong exposure of the internal part of the refrigerant system to moist air. Residual POE oil in the piping and components can absorb moisture from the air.

c) Ensure that the compressor is not expose to open air for more than the recommended time specified by its manufacturer (typically less than 10 minutes). Removed the seal-plugs only when the compressor is about to be brazed.

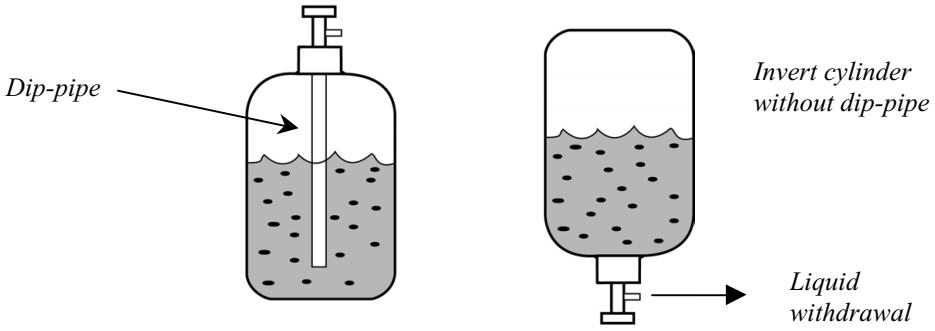
d) The system should be thoroughly vacuumed to 1.0 Pa (-700mmHg) or lower. This vacuuming level is more stringent than R22 system so as to ensure no incompressible gas and moisture in the system.

e) When charging R407C, ensure that only liquid is being withdrawn from the cylinder or can. This is to ensure that only the original composition of R407C is being delivered into the system. The liquid composition can be different from the vapor composition.



Composition of R407C in vapour phase is different from liquid phase.

f) Normally, the R407C cylinder or can is being equipped with a dip-pipe for liquid withdrawal. However, if the dip-pipe is not available, invert the cylinder or can so as to withdraw liquid from the valve at the bottom.



g) When servicing leak, the top-up method, commonly practiced for R22 system, is not recommended for R407C system. Unlike R22 where the refrigerant is of a single component, the composition of R407C, which made-up of three different components, may have changed during the leak. Consequently, a top-up may not ensure that the R407C in the system is of original composition. This composition shift may adversely affect the system performance. It is recommended that the system should be evacuated thoroughly before recharging with R407C.

8. CONTROLLER

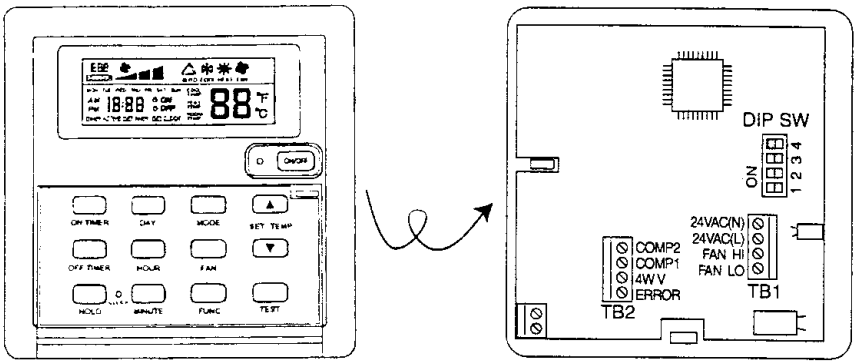
8.1 GLOBAL REMOTE CONTROLLER (PAC-204RC): MODEL: MRT080/100/150/200A/AR

CONFIRMATION OF PARTS

The following parts are contained in the carton box together with this manual.
Please check to make sure that everything is included. Q'TY

① Remote controller (upper case, lower case) 1
② Pan-head screw with cross hole M4 2
③ Wooden screw 4.1 X 16 (for installing unit directly on a wall 2
④ Instruction manual 1

OUTLINE AND INSIDE DRAWING



Outline(Key cover open) Controller board

INSTALLATION

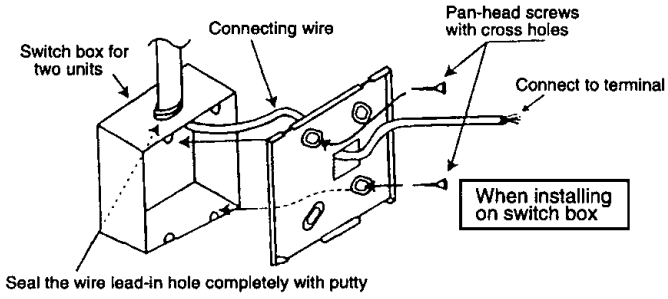
(1) Decide where you want to install the remote controller (switch box)
In deciding, please observe the following precautions:

Do not install the remote controller in locations, which are:

- Exposed to direct sunlight
- Susceptible to humidity and moisture
- Near a source of heat
- Near machines emitting high-frequency waves. (High-frequency welders, etc.)

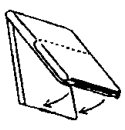
1) Procure the following parts locally : Switch box for two units
Connecting wire (Length : below 20m size : 0.3mm ~ 0.75mm)
Lock nut, bushing

(2) Install the lower case on the switch box.



Caution :
- Over-tightening the screws can cause deformation and/or cracks on the lower case.
- Install the remote controller on a wall with flat surface. Installation on an uneven surface can cause cracks on the LCD and other failures.

Snap the upper case into place. Hook the two upper claws into their slots, and shut the lower part as shown in the right diagram.



Caution :
- Press the case until it snaps shut.
- To use, remove the protective sheet on the operation section.

To remove the upper case, insert a screwdriver(-) into one of the slots and side it in the direction of the arrow shown in the diagram on the right

Caution :
- Do not turn the screwdriver while it is inserted into the slot. Doing so can result in damage to the slot.

SETTING DIP SWITCH

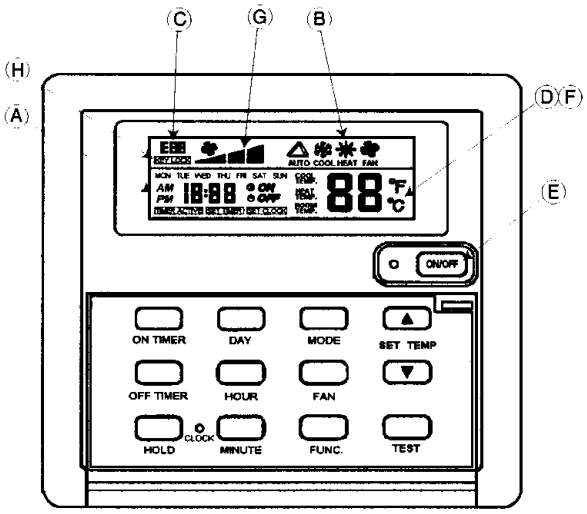
Set the DIP switches on the basis of the below table.

		DIP switch 1		DIP switch 2		DIP switch 3		DIP switch 4	
		ON	OFF	ON	OFF	ON	OFF	ON	OFF
Factory pre setting			❍	❍			❍	❍	
MRT setting			❍(Not change)	❍ (Not change)			❍ (Not change)	❍ (Not change)	
MRT-AR setting		❍ (Change)		❍ (Not change)			❍ (Not change)	❍ (Not change)	
FUNCTION	Mode select	Heat pump	Cooling only						
	Fan speed Hi / Lo (*1)			Do not change DIP switch 2					
	Auto change over function (*2)					Available	Not Available		
	Auto start at power failure (*3)							Not Available	Automatically

Note. *1: This function is not applicable because the fan speed is constant.
*2: If need this function, please consult your local McQuay sales office for application advice on this function.
*3: This function can be changed by customer.
If this function is used, the unit will auto re-start when power supply resumed from power failure.

GLOBAL REMOTE CONTROL (PAC-204RC)

DISPLAY SECTION



A [Current/start/ending time] Display
B Operation mode
Displays the status of operation.
C [Checking] Display
This display appears when abnormality occurs in the unit.
D [Set temperature] Display
Displays the set temperature.
E [Operation] Lamp
Lights up during operation, goes off during stop.
F [Room temperature] Display
Displays the temperature of the air sucked in during operation.
G [Fan speed] Display
To indicate High-speed or Low-speed.
H [Key lock] Display
This display appears when key lock function is active.

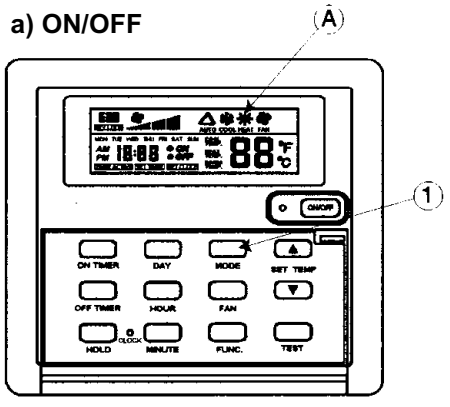
BEFORE STARTING OPERATION

* Make sure that the power supply is turned ON before use. (Keep the power supply turned ON at all times when the air conditioner is in use. Use of the unit without power can result in compressor failure.)

WARNING:

Check and confirm the power circuit before use. For the contents, refer to the previously described chapter [Crucial points to be observed for safety].

a) ON/OFF



Ⓐ Operation mode display

START AN OPERATION

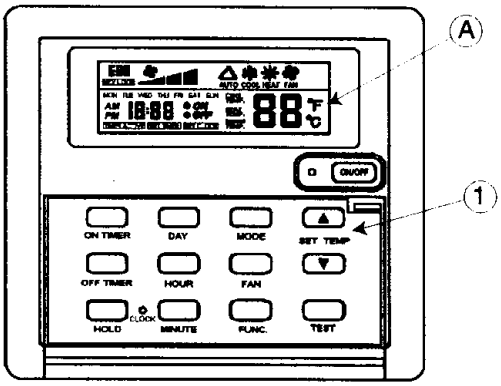
① Press the [ON/OFF] button Operation lamp lights up and operation starts.

STOP AN OPERATION

① Press the (ON/OFF] button again
Operation lamp goes off and operation stops.

- Once the buttons have been set, pressing of the [ON/OFF] button only can repeat the same operation thereafter.
- During operation, the operation lamp above the [ON/OFF] button lights up.

b) SELECTING OPERATION



Ⓐ Operation mode display

WHEN SELECTING OPERATION

① Press the [MODE] button
Consecutive press of the [MODE] button switches the operation over to "FAN" , "COOL" or “HEAT”.
For the contents of operation, check the display.

FOR FAN

Press the [MODE] button and bring up the "FAN" display.

- The fan operation functions to circulate the air in the room.
- The temperature of the room cannot be set by fan operation.

CAUTION:

Never expose your body directly to cool air for a long time. Excessive exposure to cool air is bad for your health, and should therefore be avoided.

FOR COOLING

Press the [MODE] button and bring up the "COOL" display.

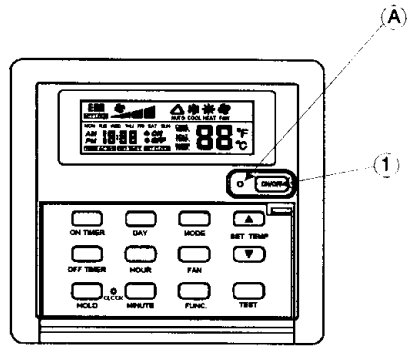
FOR HEATING

Press the [MODE] button and bring up the "HEAT" display.

CAUTION:

- When the air conditioner is used together with burners, thoroughly ventilate the area. Insufficient ventilation can result in accidents due to oxygen deficiency.
- Never place a burner at a place where it is exposed to the airflow from the air conditioner. Doing so can result in imperfect combustion of the burner.

c) ROOM TEMPERATURE ADJUSTMENT



Ⓐ Set temperature display and room temperature display
Ⓐ Operation lamp

TO CHANGE ROOM TEMPERATURE

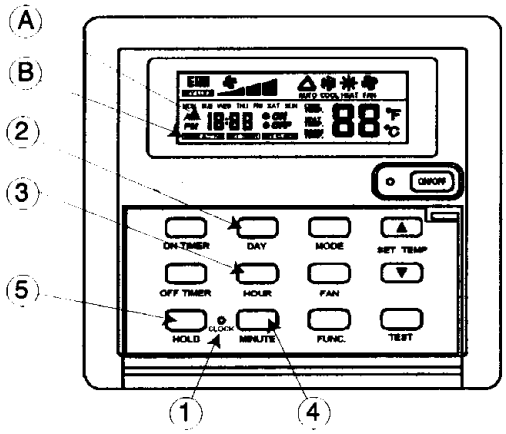
① Press the room temperature button and set the room temperature of your choice.
Press △ or ▽ once changes the setting by 1°C . If the pressing is continued, the setting continues to change by 1°C.

* Indoor temperature can be set within the following range.
Cooling 19 ~ 30°C

* It is impossible to set the room temperature by the air-blow operation.

① Press △ and ▽ together, the unit of temperature change "°C " (degree-centigrade) and "°F" (degree-Fahrenheit)

d) TIME SETTING



Ⓐ Current time display

Ⓑ Timer Hold/Resume display

CLOCK KEY

① Press the key one time will activate set clock mode.
Press the key again will disable set clock mode.

② ~ ④ Under set clock mode, the real time clock and present day setting can be changed by pressing Day key, Hour key or Minute key.

7-DAYS TIMER KEY

① There are two keys for timer. One is ON Timer, another is Off Timer.
Press the key one time will activate set timer mode.
Press the key again will disable set timer mode.

② ~ ④ Under set timer mode, the 7-days timer setting can be changed by pressing Day key, Hour key or Minute key.

DAY KEY

②During set clock mode or set timer mode, press the key will change the day setting.

HOUR KEY

③During set clock mode or set timer mode, press the key will change the hour setting.

MINUTE KEY

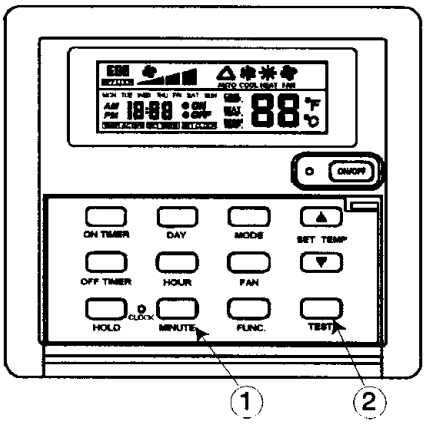
④During set clock mode or set timer mode, press the key will change the minute setting.

TIMER HOLD/RESUME KEY

If 7-days timer is set, then the word "Timer Active" is displayed.

⑤ To clear all the timers setting, Press and hold the hold key until the word "Timer Active" is not displayed.
To resume the timer setting after timers have been held, press and hold the key until the word " Timer Active" is displayed.

e) OTHER FUNCTION



KEY LOCK

① Press the "MINUTE" key three times consecutively, "KEY LOCK" symbol will appear on LCD screen.
At this time, only "ON-OFF" key is valid.
This function purpose is protect from mischief of child etc.

To cancel the key lock function, Please press "MINUTE" key three times consecutively again.

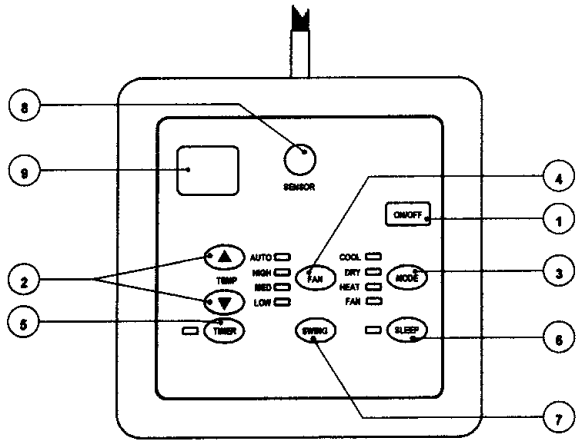
TEST RUN

② Press the "TEST" key two times consecutively.
The unit will run and finished automatically after two hours.

f) REMOTE CONTROLLER ERROR DISPLAY

Indicate	Cause	Troubleshooting
E01	Room temperature sensor open.	Automatically reset to restoration error.
E02	Room temperature sensor short.	Automatically reset to restoration error.
E03	Error input from indoor unit or Outdoor unit.	Push the On-Off switch. (OFF to ON)

8.2 SLM WIRED CONTROLLER (MODEL : M4RT080/100A/AR; MODEL: MRT080/100 A/AR OPTIONAL)



SLM

1. "ON/OFF" switch

- Press to start the air conditioner unit.
- Press again to stop the unit.

2. Temperature setting

- Set the desired room temperature.
- Press button to increase or decrease the set temperature. Setting range are between 16°C to 30°C (60°F to 80°F).

3. Operation Modes

- Press the "mode" button for select the type of operating mode.
  - Cooling Only :
    COOL, DRY, FAN
  - Heat Pump :
    AUTO, COOL, DRY, HEAT, FAN
  (AUTO mode is represented by both COOL and HEAT LED light on)

4. Fan Speed selection.

- Press the button until the desired fan speed is achieved.

5. Timer.

- Press the set button to select the switch timer of the air conditioner unit (the setting range is between 1 to 10 hours).

6. "Sleep" mode

- Press button to activate the sleep function. This function can only be activated under "cool" or heating mode operation. When it is activated under "cool" mode operation, the set temperature will increase 0.5°C after 30 minutes, 1°C after 1 hour and 2°C after 2 hours. If it is activated under "HEAT" mode operation, the set temperature will be decreased 0.5° C after 30 minutes, 1° C after 1 hour and 2° C after 2 hours.

7. Air Swing

- Press button to activate the automatic air swing function.

8. Sensor

- Infra red sensor to receive signals from wireless controller.

9. LED display

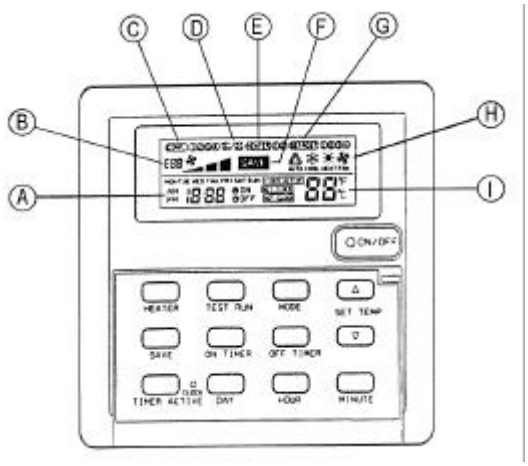
- To display the set temperature (in º C) and timer delay setting (in hours).

10. Transmission source

- To transmit signals to the air conditioner.

8.3 SEQUENTIAL CONTROLLER
(MODEL : MRT250/300A/AR, M4RT150/200/250/300A/AR; OPTIONAL: MRT150/200A/AR)

SEQUENTIAL CONTROLLER FUNCTIONS
I) SEQUENTIAL CONTROLLER LCD DISPLAY



A : Time display
B : Error indication
C : Compressor running display (up to 4 compressors)
D : Key lock display
E : Heater display (up to 2 heaters)
F : Energy saving mode display
G : Compressor defrost cycle display (up to 4 compressors)
H : Operation mode display
I : Temperature set display

II) OPERATING GUIDE

a) **ON/OFF** key
Press once to start the air conditioning unit.
Press again to stop the unit.
The operation lamp next to the key lights up and goes off respectively when the unit is running or not running.
Caution : In the case when the **ON/OFF** key is pressed immediately after the operation is stopped, the unit will not restart until 3 minutes later to protect the compressor.

b) Selecting Operation Mode
Press the **MODE** key to select the type of operating mode. Consecutive press of the key switches the operation over *"COOL", "HEAT", "AUTO" and "FAN"*

c) **SAVE** Mode
Press the **SAVE** key to select the energy saving function. This option is only available for "COOL", "HEAT" and "AUTO" modes.

d) Auxiliary Electric Heater
If the "HEAT" mode provides insufficient heating to a room even at the highest temperature setting (30°C), press the **HEATER** key to activate the auxiliary electric heater. For models with two heaters, consecutive press of the key allows the selection of one or both heaters active.

e) Temperature Setting
To set the desired room temperature, press ▲ or ▼ to increase or decrease the set temperature in the range of 16°C to 30°C.
Press both ▲ and ▼ simultaneously to toggle between °C and °F setting.

f) Time Setting
Real time Clock
Press the **CLOCK** key once to activate set clock mode.
Press again to disable set clock mode.
Under set clock mode, the time of the present day can be set by pressing the respective **MINUTE, HOUR** and **DAY** key.

7-days timer

Press the **ON TIMER** key to activate auto-ON timer mode. Under this mode, press the respective **MINUTE, HOUR** and **DAY** key to select the time of the week when the air-conditioning unit is to automatically start running. Press the **ON TIMER** key again to save the setting.

Press the **OFF TIMER** key to activate auto-OFF timer mode. Under this mode, press the respective **MINUTE, HOUR** and **DAY** key to select the time of the week when the air-conditioning unit is to automatically stop running. Press the **ON TIMER** key again to save the setting.

Then to activate the 7-days timer, press and hold the **TIMER ACTIVE** key until the word "TIMER ACTIVE" appears on the LCD screen. Repeat the same step to disable the 7-days timer.

g) Other Function

Key Lock

Press the **MINUTE** key 3 times consecutively to activate the key lock. A *"KEY LOCK" symbol* will appear on the LCD screen. At this point, only the **ON/OFF** key is valid.
To disable the key lock, again press the **MINUTE** key 3 times consecutively.

Test run

Press the TEST key 2 times consecutively to test run the unit.

III) ERROR CODE

When the system is on and an error occurs, the **ON/OFF** LED on the LCD panel will blink and an error code is shown. When the system is off and there is a thermistor error, the **ON/OFF** LED is off but the error code is still displayed. Each error code represents different message as below

Error code	Possible fault	Error code	Possible fault
E01	Require manual reset (possible causes)	E19	Indoor coil sensor 4 short
E02	Compressor 1 high temperature (overload)	E20	Indoor coil sensor 1 open
E03	Compressor 2 high temperature(overload)	E21	Indoor coil sensor 2 open
E04	Compressor 3 high temperature(overload)	E22	Indoor coil sensor 3 open
E05	Compressor 4 high temperature(overload)	E23	Indoor coil sensor 4 open
E06	Compressor 1 high pressure trip / contact open	E24	Outdoor coil sensor 1 short
E07	Compressor 2 high pressure trip / contact open	E25	Outdoor coil sensor 2 short
E08	Compressor 3 high pressure trip / contact open	E26	Outdoor coil sensor 3 short
E09	Compressor 4 high pressure trip / contact open	E27	Outdoor coil sensor 4 short
E10	Compressor 1 trip / low R-22 / outdoor abnormal	E28	Outdoor coil sensor 1 open
E11	Compressor 2 trip / low R-22 / outdoor abnormal	E29	Outdoor coil sensor 2 open
E12	Compressor 3 trip / low R-22 / outdoor abnormal	E30	Outdoor coil sensor 3 open
E13	Compressor 4 trip / low R-22 / outdoor abnormal	E31	Outdoor coil sensor 4 open
E14	Room sensor short	E32	Compressor 1 de-ice
E15	Room sensor open	E33	Compressor 2 de-ice
E16	Indoor coil sensor 1 short	E34	Compressor 3 de-ice
E17	Indoor coil sensor 2 short	E35	Compressor 4 de-ice
E18	Indoor coil sensor 3 short		

IV) INSTALLATION OF LCD REMOTE CONTROLLER

a) Accessories

The following accessories are included. If any part is missing, contact your dealer immediately.

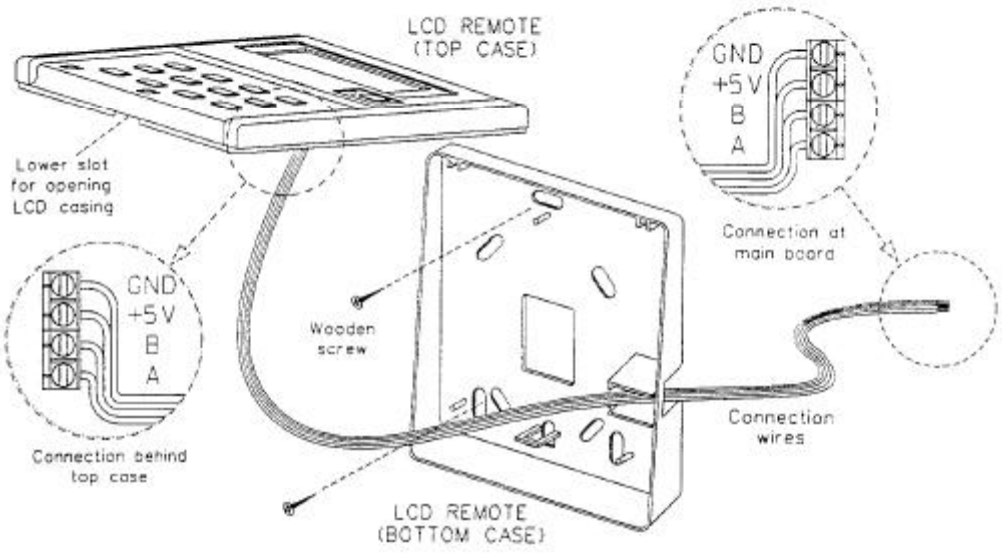
① Remote controller
② Wooden screw 4.1 x 16 (2 pieces)
③ Instruction manual

b) Step-by-step guide

i) First, open up the casing of the LCD remote controller **into its top and bottom** case using a screwdriver. To do this, insert the screwdriver into the lower slot and slide it in the outward direction.
ii) Fix the bottom case onto the wall with the 2 wooden screws provided. Then, insert the 4 connecting wires (from the main board) through the slot on the lower right.

iii) Connect one end in each of the 4 wires to the terminal block behind the top case as shown below. The wire that goes into the "GND" terminal at the top case must be connected at the other end to the “GND" terminal at the main board. The same goes for the "+5V", "B" and "A" connection.

iv) Fasten back the top and bottom case into place. Hook the two upper claws into their respective slots and snap the lower part shut.



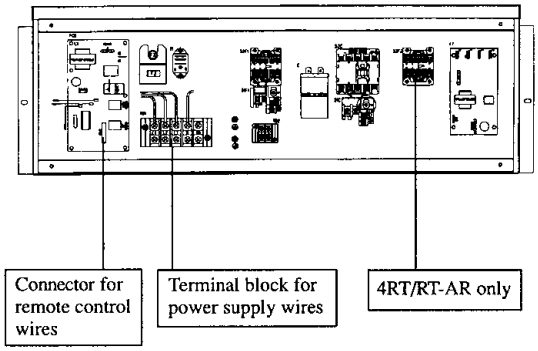
9. ELECTRIC WIRING

Construct the earth connection.
All electrical work must be carried out by a suitable qualified electrical trades-person and in accordance with local supply authority requirements and associated regulators.
The unit is to be wired directly from an electrical distribution board either by a circuit breaker (preferred) or HRC fuse.

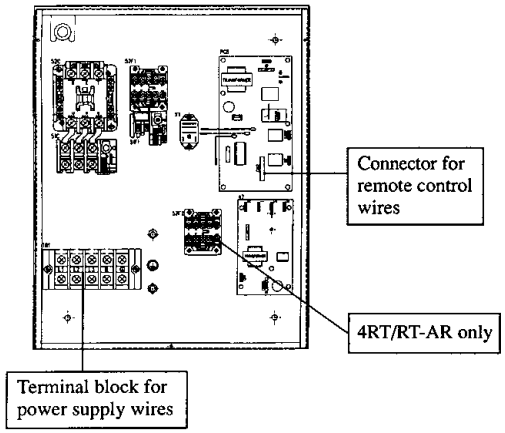
Fix power source wiring to control box by using buffer bushing for sensible force (PG connection or the like). Connect control wiring to control terminal block through the knockout hole of control box using ordinary bushing.

NOTE : Earth wiring must be connected.
Arrangement such as terminal block in control box.

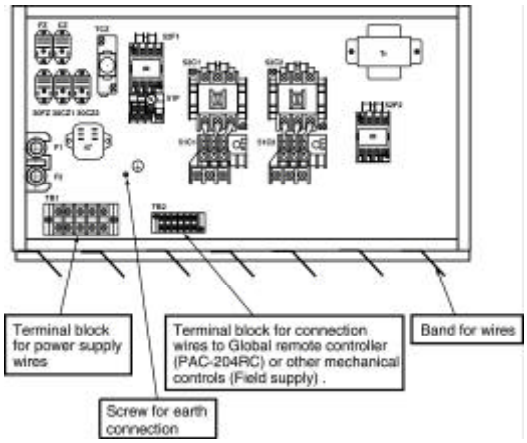
Control module of unit (MRT/M4RT060A/AR)
(STANDARD)



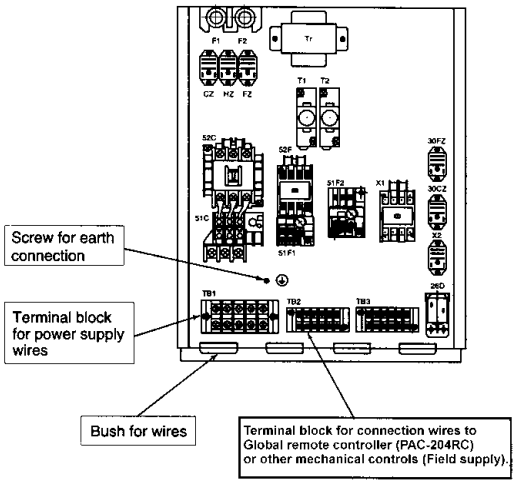
Control module of unit (MRT/M4RT080/100A/AR, MRT/M4RT120A/AR) (STANDARD)



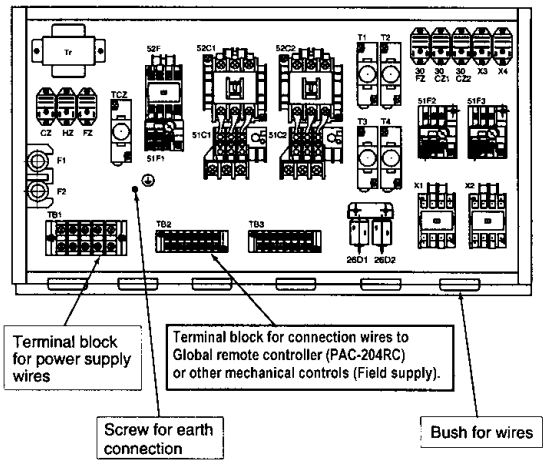
Control module of unit (MRT150/200A)
(STANDARD)



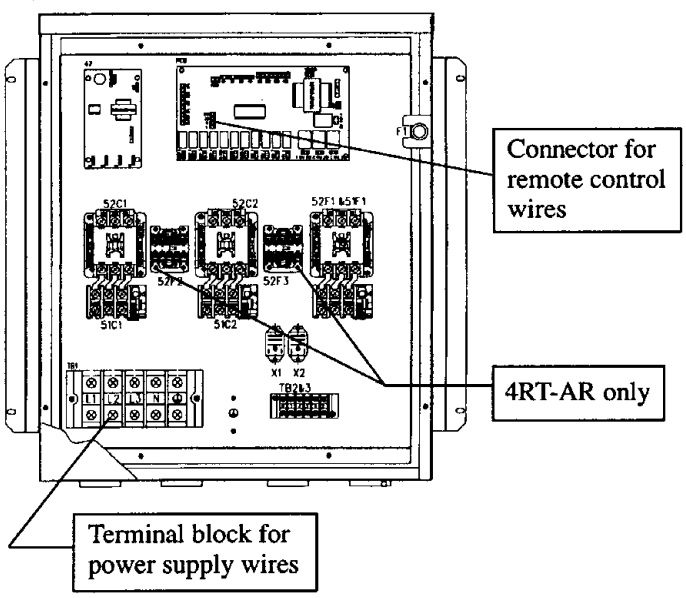
Control module of unit (MRT080/100AR)
(STANDARD)



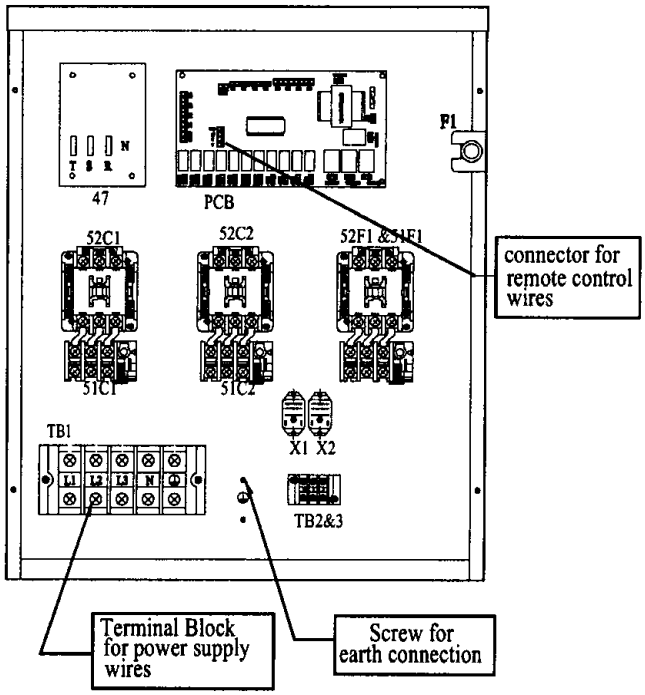
Control module of unit (MRT150/200AR)
(STANDARD)



Control module of unit (MRT250/300AR, M4RT250/300AR) (STANDARD)



Control module of unit (MRT250/300A, M4RT250/300A (STANDARD)

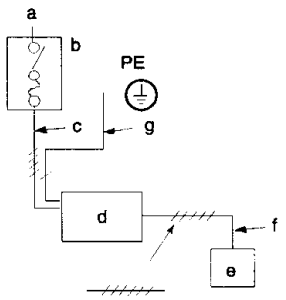


Method for connecting electric wire

Please do the wiring after consulting the electric power company of jurisdiction beforehand in the instruction.

(I) The entire wiring diagram of unit.

MRT060~300A/AR



a.	Power supply
b.	Main switch/fuse (field supply)
c.	Power supply wiring for unit
d.	Unit
e.	Remote controller
f.	Connection wiring for unit / remote controller (no polarity)
g.	Earth

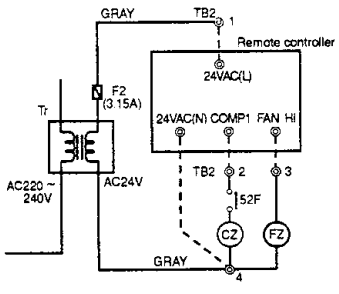
(II) Electrical wiring

Remove the panel on the right side (MRT080/100A/AR) or the rear side (MRT150/200A/AR) of the unit and connect the unit's power supply wiring to the proper terminals in the control box.

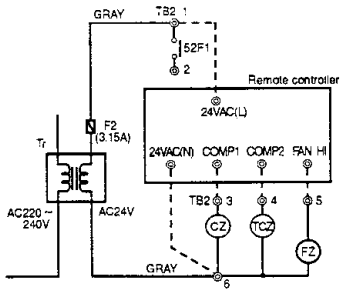
Connect the wires by the following wiring diagram. Miss connection will damage the controller.

PAC-204RC – Global Remote Control

MRT080/100A

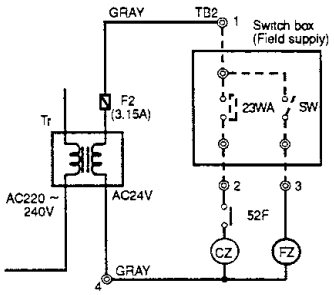


MRT150/200A

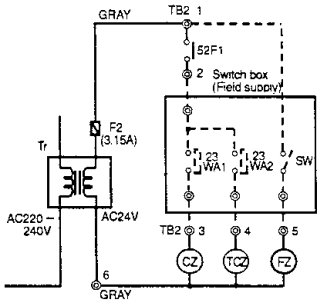


Switch box (Field supply)

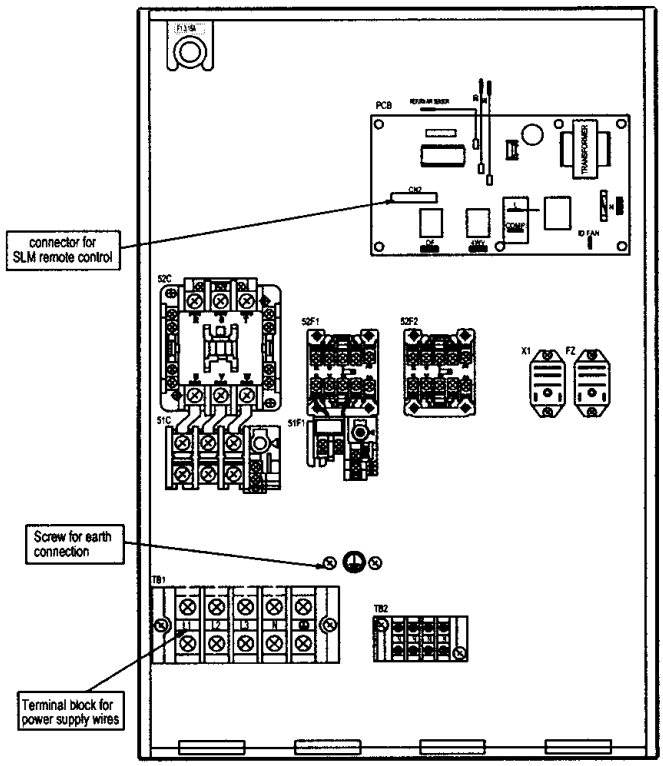
MRT080/100A



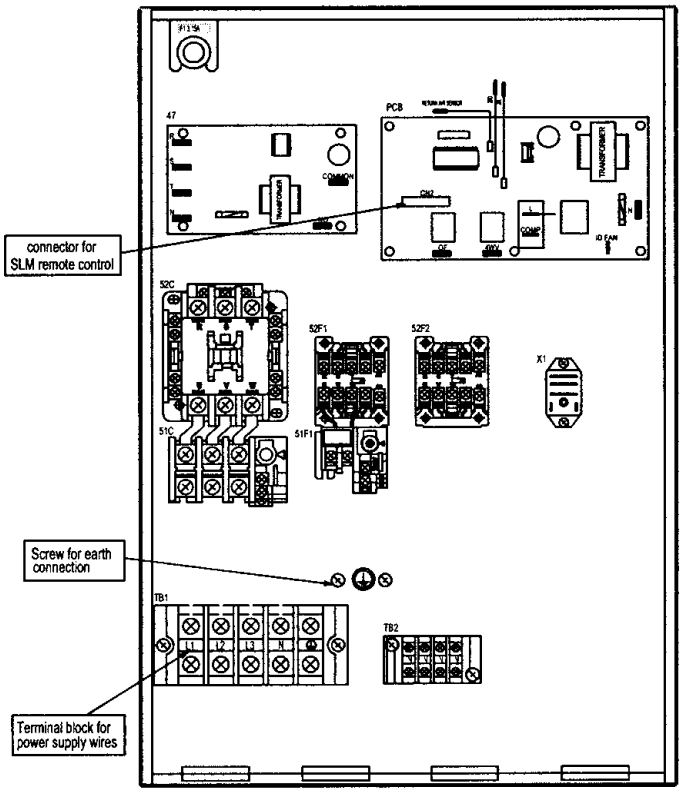
MRT150/200A



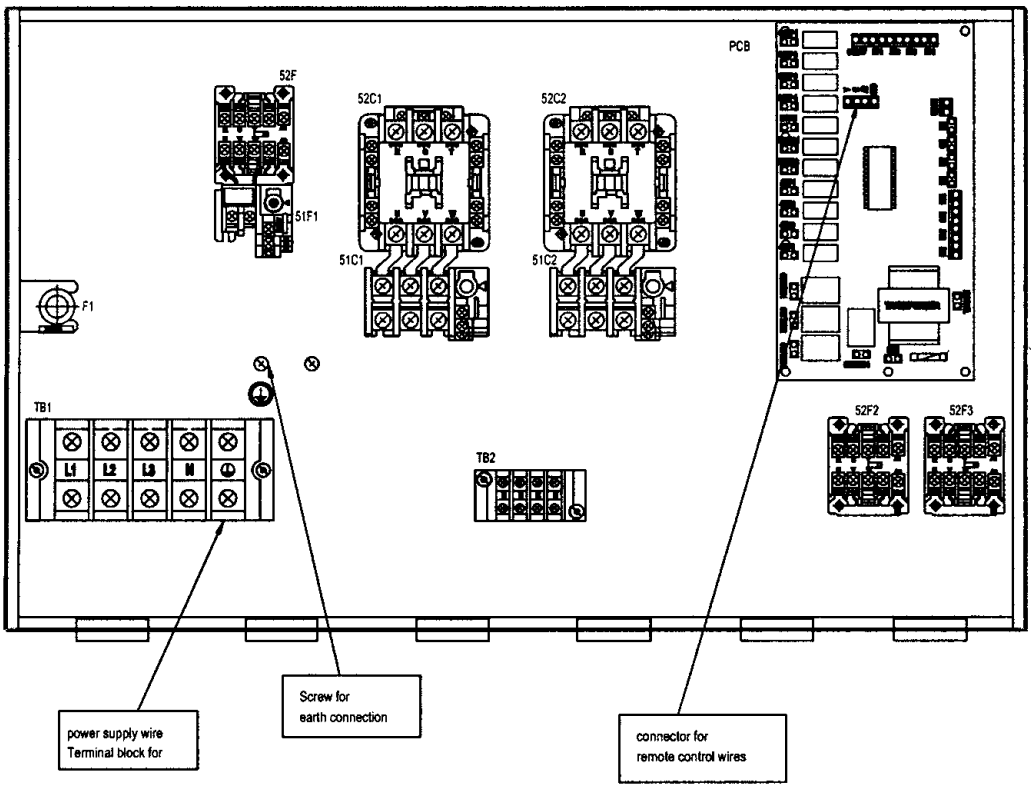
Control module of unit (MRT080/100AR)
(Optional: IC control)



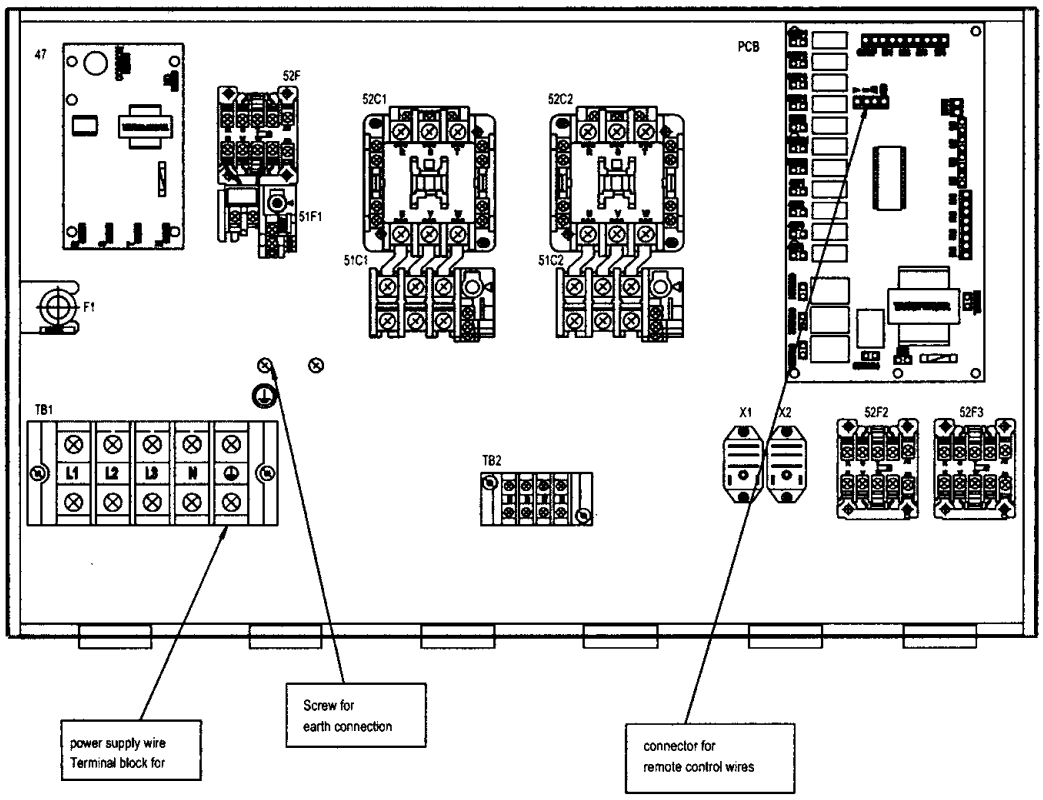
Control module of unit (M4RT080/100AR)
(Standard: IC control)



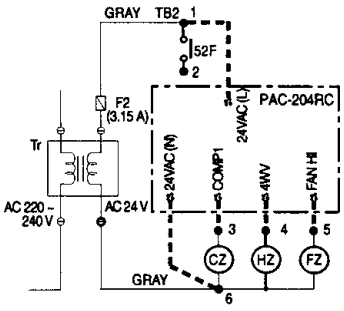
Control module of unit (MRT150/200AR)
(Optional: IC control)

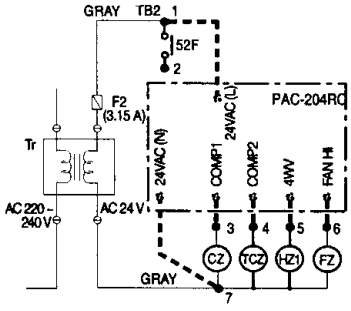


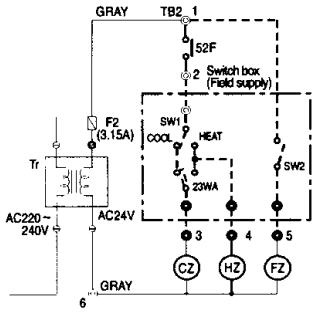
Control module of unit (M4RT150/200AR)
(Standard : IC control)

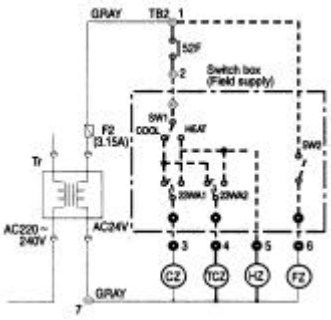


MRT080/100AR MRT150/200AR MRT080/100AR MRT150/200AR









(III) Wiring example and selection of earth leakage breaker
380~415V, 50Hz, 3∅

Model	Power cable	Breaker capacity	Over current protection switch	Earth cable	Fuse (class B)	Earth leakage breaker (with over-load protection)	
MRT060A/AR	8 mm^2	40A	40A	8 mm^2 over	40A	40A	30 mA 0.1s or less
MRT080A/AR	14 mm^2	50A	50A	14 mm^2 over	40A	50A	30 mA 0.1s or less
MRT100A/AR	14 mm^2	50A	50A	14 mm^2 over	40A	50A	30 mA 0.1s or less
MRT120A/AR	14 mm^2	50A	50A	14 mm^2 over	40A	50A	30 mA 0.1s or less
MRT150A/AR	22 mm^2	100A	100A	22 mm^2 over	40A	100A	100 mA 0.1s or less
MRT200A/AR	22 mm^2	100A	100A	22 mm^2 over	40A	100A	100 mA 0.1s or less
MRT250A/AR	38 mm^2	125A	125A	22 mm^2 over	40A	125A	100 mA 0.1s or less
MRT300A/AR	60 mm^2	175A	175A	30 mm^2 over	40A	175A	100 mA 0.1s or less

Table above is an example, the selection of capacities should be determined according to the relevant standards.
Note : For all electrical wiring must be comply with local electrical authority regulations.

(a) The grounding wire must be of the same diameter as the power cable wires. Table on the right is an example. The selection of other capacities should be determined in accordance with the relevant standards.
(b) Table on the right is an example. The selection of other capacities should be determined in accordance with the relevant standards.

Note.
All electrical wiring must be comply with local electrical authority regulations.

10. THE PUTTING CONDITION OF THE BELT

1. Set the parallel angle of the fan and the motor pulley as shown in the table and figure 1 below.
2. Set the tension of the per one belt when the flexion load is within the range as shown in the figure 1 and table 2 below at the proper flexion. (A=0.016xC mm)
3. Adjust the suitable tension after the belt sit properly across the pulley (after working for 24-28 hours).
   When the new belt is used, adjust the suitable tension about the 1.3 times of the maximum value of the flexion load.
4. Readjust the belt every 2,000 hours after the first adjustment.
   Exchange the belt when the belt's surroundings length has expanded by 2% including the first expansion of the belt. (About 1%) (about 8,000 hours converted working time)

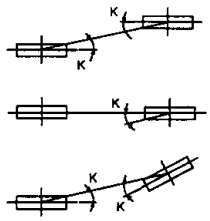


figure 1 Parallel degree of pulley

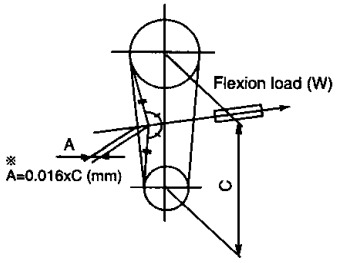


figure 2 Belt tension

table 1

pulley \ Parallel angle	K (")	note
pulley	10 or less	Gap of 3 mm every 1 m

table 2

pulley		Flexion load W (N)
type	Smaller out diameter (mm)	
B	~ 135	22 ~ 29
	136 ~ 160	27 ~ 34
	161 ~	29 ~ 37

11. BEFORE STARTING THE TRIAL RUN

After having installed the unit, check that:

(1) The unit is fixed securely.
(2) The unit is installed properly.
(3) The drain pipe is provided with a drain pipe.
(4) The electrical wiring has been connected correctly and the terminal screws have been properly tightened.
(5) The duct work has been performed correctly.
(6) Before turning the unit on, measure the resistance between the terminals of the electrical parts and ground with a 500V megger and check that the value is at least 1.0M ohm.
   If the measured value is below 1.0M ohm, do not operate the unit.
(7) The unit is used phase protector (47).
   If wiring phase of power supply is mistaken, the unit does not run.
   Please reconfirm and modify wiring phase.
(8) Check that the fans are rotating in the proper direction.
(9) Check to see whether there are refrigerant leakage, and slack power or transmission cable.
(10) Check the operation of high-pressure switch.
   If the two lead wires of the outdoor unit fan motor are disconnected from the contactor and cooling is performed, the high-pressure switch should operate and stop the unit after 5 to 10 minutes.

Perform trial operation after completion of above items.

Servicing And Maintenance

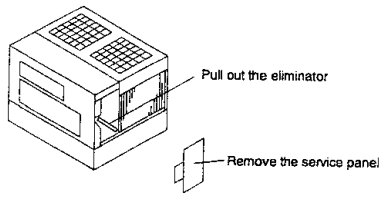
FOR SUPERIOR PERFORMANCE AND LASTING DURABILITY, PLEASE DO NOT FORGET TO CONDUCT PROPER AND REGULAR MAINTENANCE.

⚠ Warning
1.Do not wash the unit with water.
If washed with water, electrical shock may be caused.
2.Ahead of the maintenance.
For safety, turn the power source off before service work.

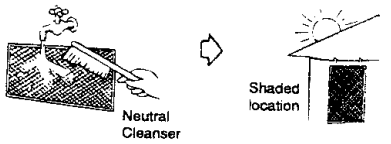
1.1 Cleaning The Saranet Filter

Clean the saranet filter about once a week (If you do not use the air filter which is special order or field supply) with a neutral cleanser and leave it to dry in a shady location.
Clean more regularly if the air filter gets very dirty.
If the eliminator gets blocked, air will not be sucked in properly, and the cooling effect will deteriorate.
Failure to clean the saranet filter may result in equipment breakdown or malfunctions.

1. Removing the saranet filter.
The saranet filter is mounted in the service panel.
(in front of the heat exchanger.)



2. The saranet filter is cleaned with the cleaner or washed in clear water.
Please wash the dirty saranet filter in lukewarm water with neutral detergent.
Please do not use a hot water of 50°C or more.
(It transforms occasionally.)
It is necessary to avoid massage washing and squeeze strongly.
It must rinse enough and the detergent must not remain.
3. When the eliminator is washed in clear water, it is often dried under the shade.
Please do not dry it to direct sunshine and a direct fire.



4. The eliminator is installed as before.

1.2 Cleaning Of Panel.

Clean dirt of panel as follows.
Use a household neutral cleanser such as for dishes or vegetables.
Motion a soft cloth with the cleanser, then wipe lightly.
Next, wipe three or four times with another soft cloth moisten with water.
Finally, wipe off all the remaining cleanser with a soft cloth.
Moisten a soft cloth with the alcohol, then wipe off lightly.
Isopropyl alcohol is sold at stores as regents in small quantities.

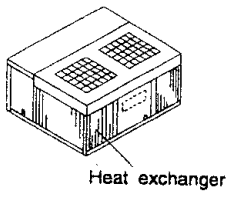
Fingermarks
Grease
→ **Neutral Cleanser**

Adhesive
Paste
→ **Isopropyl alcohol**

Note:
Alcohol is highly combustible. Take extreme care when handling. Also, do not use paint or adhesive thinner.

1.3 Cleaning The Outdoor Heat Exchanger

If you use your air conditioner for prolonged periods, the outdoor heat exchanger will become dirty, impairing its function and reducing air conditioners performance.
Consult your equipment supplier or air conditioning contractor on how to clean the heat exchanger.



1.4 When Beginning To Use Air Conditioner Again.

Please turn on the power supply after checking is done and abnormality is not found.
Please do the following work.
It is confirmed that air inlet and outlet are not blocked.
It is confirmed that the earth connection line does not come off.
The earth connection line is firmly installed in the unit.
It is confirmed that there are neither lifting, blocking, nor bending of the drain-hose.

1. It is confirmed to keep the controller OFF.
2. The power supply switch is turned on.

1.5 When The Air Conditioner Is Not To Be Used For Long Time.

If the air conditioner is not to be used for a long time due to a seasonal change, etc.,
Please do the following work.

1. The power supply switch is turned off.
   If the power supply is kept on, several watts or several tends of watts will be wasted.
   Also, the accumulation of dust, etc., can result in fire.
2. Filter, eliminator and drain pan are cleaned. Pay attention to throw dust in the drain.
3. Run it for 4-5 hours with the air blowing until the inside is completely dry.
   Failing to do so can result in the growth of unhygienic, unhealthy mold in scattered areas throughout the room.

1.6 In Case Of Failure.

(1) Never remodel the air conditioner. Consult your dealer for any repair service.
Improper repair work can result in water leakage, electric shock, fire, etc.
(2) If the poser breaker is frequently activated, get in touch with your dealer.
Leaving the unit as it is under such conditions can result in fire or failure.
(3) If the refrigeration gas blows out or leaks, stop the operation of the air conditioner.
(4) Thoroughly ventilate the room, and contact your dealer.
Leaving the unit as it is can result in accidents due to oxygen deficiency.

2. Transferring work, and construction.

2.1 Transfer Of Installation.

(1) When removing and reinstalling the air conditioner when you enlarge your home, remodel, or move, consult with your dealer in advance to ascertain the cost of the professional engineering work required for transferring the installation.
(2) Please do not mix the one other than a specified refrigerant when you add the refrigerant (R-22) at the installation and the transferring.
(3) When moving or reinstalling the air conditioner, consult with your dealer.
Defective installation can result in electric shock, fire, etc.

2.2 Place For Installation.

Please do not use the unit in the following places.
(1) Place where a lot of oil (The machine oil is contained), moistures, and dust exist.
(2) Place where a lot of salinities such as beach districts exists.
(3) Place where sulfur gas, volatile gas, and corroded gas are filled.
(4) Place where acid solution is frequently used.
(5) Place where special spray is frequently used.
(6) Hot spring zone.
(7) Near to machine which generates high cycle (High cycle welding machine etc.).
(8) Place where ventilation entrance of unit is closed by snowfall.
(9) The unit must be installed on stable, level surface.
The main body might corrode when the unit is used in such a place, the refrigerant leak, the performance of the unit decrease remarkably, and it cause the damage of parts of the unit.

2.3 Regarding Electric Work.

(1) The electrical work must be undertaken by a person who is qualified as an electric engineer according to the (technical standard respecting electrical installation), (internal wiring rules), and the installation instruction manual with the absolute use of exclusive circuits.
(2) Please install a special power supply in the power supply.
(3) Please install the earth connection for the electric shock prevention.
(4) Never connect the grounding wire to a gas pipe, water pipe, arrester, or telephone grounding wires. For details, consult with your dealer.
(IV) In some types of installation sites, the installation of an earth leakage breaker is mandatory.
For details, consult with your dealer.
(6) The breaker and the fuse must use the one of correct capacity.

2.4 Consideration Of The Nose.

(1) Take sufficient measures against noise when installing the air conditioners at hospitals or communication-related businesses.
(2) If the air conditioner is used in any of the above-mentioned environments, frequent operational failure can be excepted. It is advisable to avoid these type of installation sites. For further details, consult with your dealer.
(3) Choose a place where cool air and noise from the outdoor air outlet of the air conditioner do not inconvenience the neighbors.
(4) Obstacles placed near the air outlet of the unit can decrease performance and increase noise. Avoid placing any obstacles adjacent to the air outlet.
(5) If the air conditioner produces any abnormal sound, consult with your dealer.

2.5 Disposing Of The Unit.

When you need to dispose of the unit, consult your dealer.
If pipes are removed incorrectly, refrigerant (fluorocarbon gas) may blow out and come into contact with your skin, causing injury. Releasing refrigerant into the atmosphere also damages the environments.

2.6 Maintenance And Inspection.

(1) If the air conditioner is used throughout several seasons, inside can get dirty and eventually reduce the performance.
(2) Depending upon the conditions of usage, foul odors can be generated and drainage can be deteriorated due to dust and dirt, etc.

Troubleshooting

Before you ask for repair service, check the following points :

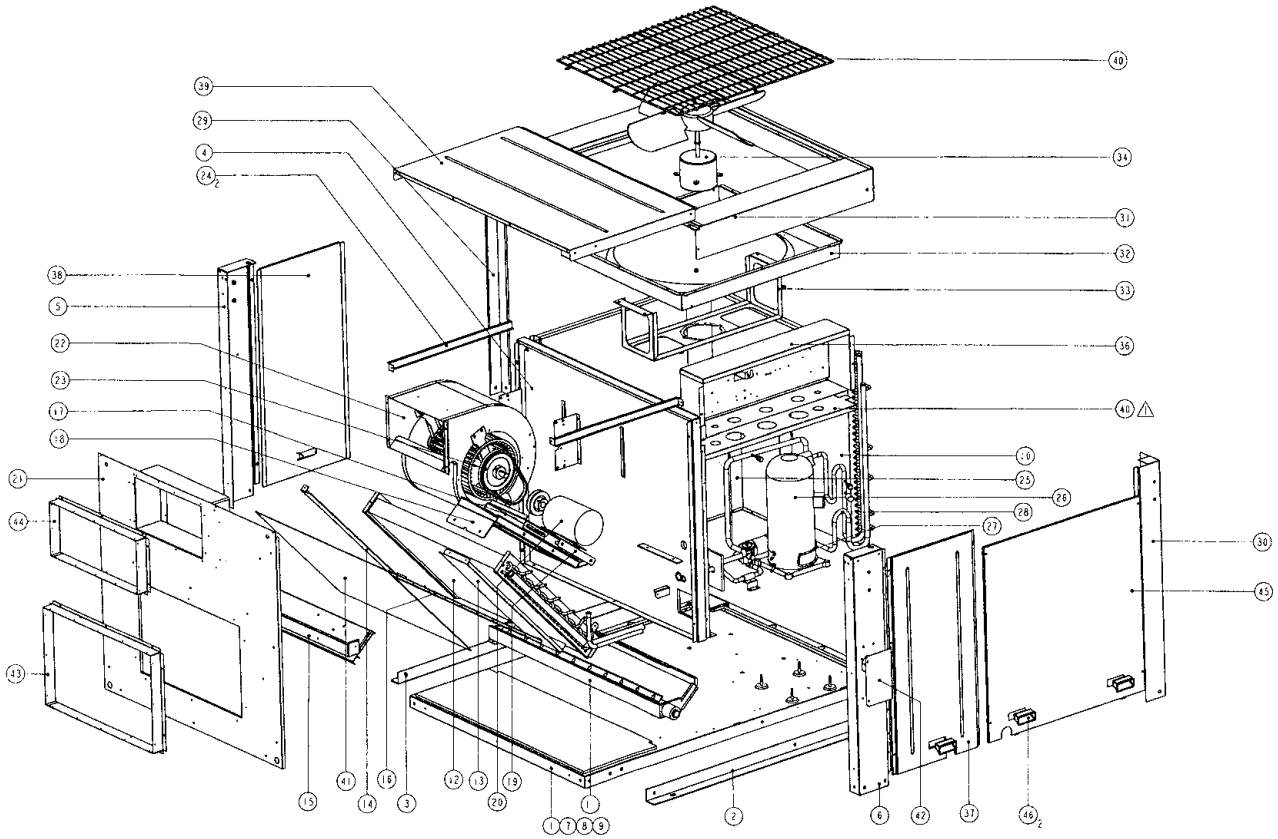
MRT060 ~ 300A/AR

Problem	Causes	Action
It does not run	Power failure	Press the [ON/OFF] button after power restore
	Fuse blown or circuit breaker tripped	Replace the fuse or reset circuit breaker
	Power supply wiring incorrect	Modify the wiring phase
Air flow is low	Filter is filled with dust and dirt	Clean the filter
	There are some obstacles at the air inlet or outlet of the units	Remove the obstacles
Compressor does not operate in 3 min after unit is started	The restart-preventing circuit is in operation for 3 minutes	Wait for a while. (To protect the compressor, a 3-minutes restart-preventing circuit is built into the unit. Therefore, there are occasions sometimes when the compressor does not start running immediately. There are cases when it does not run for as long as 3 minutes)
Compressor operate continuously	Dirty air filter	Clean the air filter
	Temperature setting too low (for cooling) Temperature setting too high (for heating)	Reset the temperature
No cool air come out during cooling cycle, or no hot air come out during heating cycle	Temperature setting too low (for cooling) Temperature setting too high (for heating)	Set the temperature lower Set the temperature higher
On heating cycle, air come out does not warm enough suddenly	Unit is defrost cycle	Wait for a while (it will be resumed after defrosting)

Note : Function not included in unit where switch box is field supply.

Part List

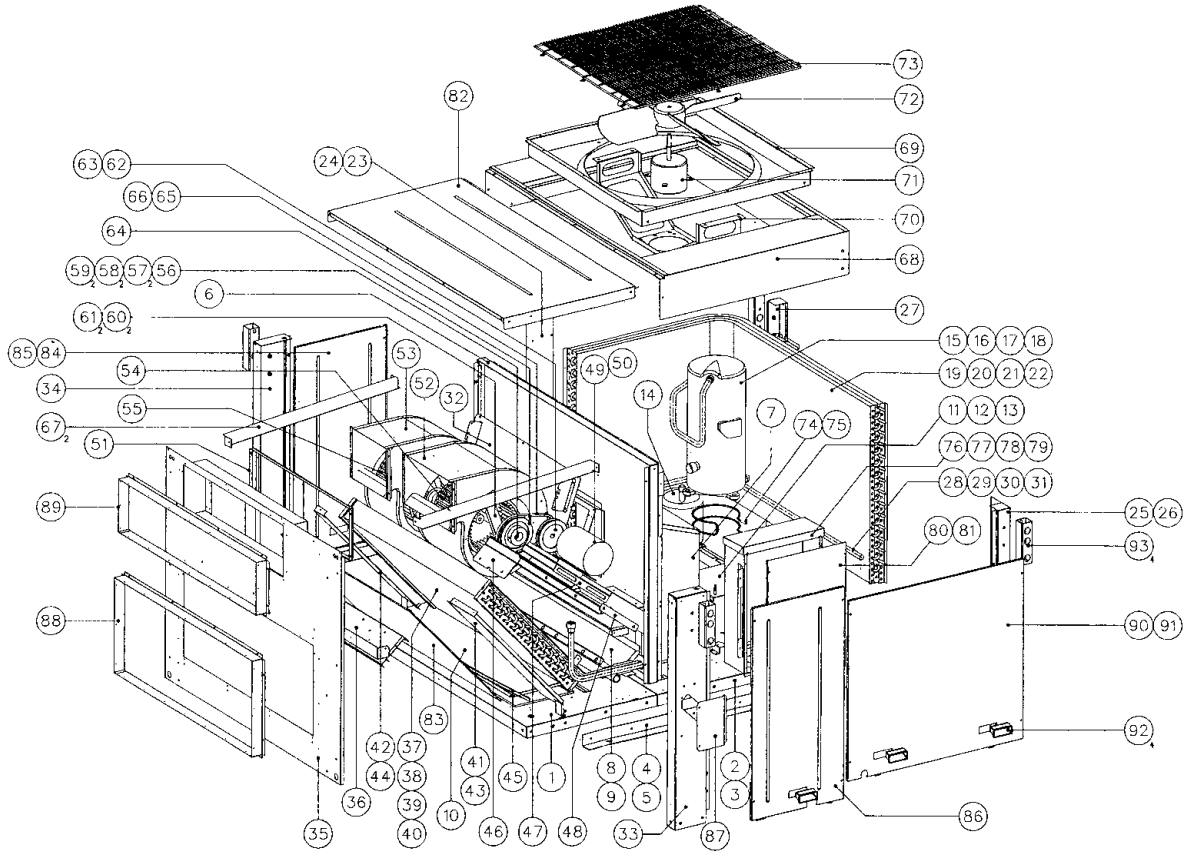
Model : MRT060A



NO	DESCRIPTION
1	ASSY. INS. BASE PAN
2	STRUCTURE BASE RIGHT
3	STRUCTURE BAE LEFT
4	ASSY. INS. PARTITION
5	ASSY. PILLAR INDOOR 2
6	ASSY. PILLAR 1
7	SUPPORT, COIL BASE
8	FRAME, OUTDOOR 1
9	FRAME, OUTDOOR 2
10	ASSY. OUTDOOR COIL RT60A
11	ASSY. INS. DRAIN PAN
12	ASSY. COIL RT60A
13	ASSY. INS. BAFFLE PLATE RIGHT
14	ASSY. INS. BAFFLE PLATE LEFT
15	ASSY. INS. FRONT BEAM
16	FILTER RAIL, BOTTOM
17	ASSY. MOTOT BASE
18	ASSY. FAN FRAME
19	SUPPORT, MOTOR BASE
20	MOTOR, 0.7 kW 50Hz
21	ASSY. INS. FRONT PANEL
22	ASSY. BLOWER SECTION
23	ASSY. DRIVE PACKAGE

NO	DESCRIPTION
24	SUPPORT, PARTITION
25	PARTITION, TUBING
26	ASSY. COMPRESSOR
27	HEATER, CRANKCASE
28	ASSY. TUBING
29	ASSY. PILLAR OUTDOOR LEFT
30	ASSY. PILLAR OUTDOOR RIGHT
31	ASSY. REAR TOP PANEL
32	ORIFICE, BELL MOUTH
33	ASSY. MOTOR BRACKET (OUTDOOR)
34	MOTOR, H220-240 / 250-2 HONG LU
36	ASSY. CONTROL BOX
37	ASSY. INS. SIDE PANEL RIGHT
38	ASSY. INS. SIDE PANEL LEFT
39	ASSY. INS. TOP PANEL INDOOR
40	COVER, PARTITION TUBING
41	AIR FILTER
42	FILTER, COVER RIGHT
43	ASSY. DUCT INTAKE
44	ASSY. DUCT DISCHARGE
45	PANEL, SERVICE
46	ASSY. COMPRESSOR
47	FAN GUARD

Model : MRT080/100 A/AR

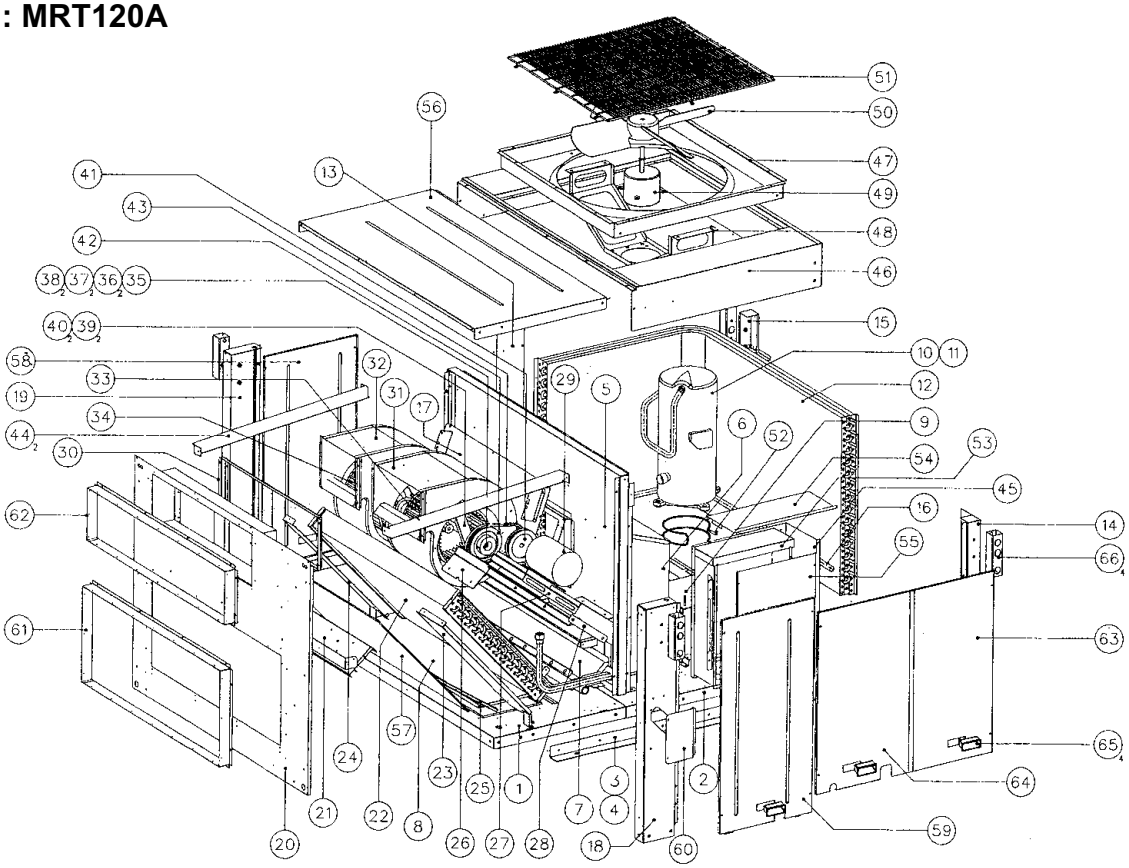


NO	DESCRIPTION
1	ASSY. BASE INDOOR
2	ASSY. BASE OUTDOOR
3	ASSY. BASE OUTDOOR
4	STRUCTURE BASE RIGHT
5	STRUCTURE BASE LEFT
6	ASSY. PARTITION
7	ASSY. SUPPLY AIR
8	ASSY. DRAIN PAN
9	ASSY. DRAIN PAN
10	COVER, LOW IN HALE
11	ASSY. COMPRESSOR BASE
12	ASSY. COMPRESSOR SUPPORT
13	ASSY. COMPRESSOR BASE
14	ACCUMULATOR, TC399637
15	COMPRESSOR, ASSY ZR94KC-TFD-501
16	COMPRESSOR, JH521YEB MITSUBISHI
17	COMPRESSOR, ASSY ZR125KC-TFD-501
18	COMPRESSOR, JH527YEB MITSUBISHI
19	ASSY. OUTDOOR COIL (PRG8)
20	ASSY. OUTDOOR COIL (PRHG8)
21	ASSY. OUTDOOR (PRG10)
22	ASSY. OUTDOOR (PRHG10)
23	PLATE, BAFFIE
24	COVER, COIL LEFT
25	ASSY. PILLAR OUTDOOR 1 (PRG8/10)
26	ASSY. PILLAR OUTDOOR 1 (PRHG8/10)
27	ASSY. PILLAR OUTDOOR 2
28	ASSY. TUBING(PRG8)
29	ASSY. TUBING (PRHG8)
30	ASSY. TUBING (PRG10)
31	ASSY. TUBING (PRHG10)

NO	DESCRIPTION
32	ASSY. COVER BLOWER
33	ASSY. PILLAR INDOOR 1
34	ASSY. PILLAR INDOOR 2
35	ASSY. FRONT PANEL
36	ASSY. BEAM FRONT
37	ASSY. COIL INDOOR (PRG8)
38	ASSY. COIL INDOOR (PRHG8)
39	ASSY. COIL INDOOR (PRG10)
40	ASSY. COIL INDOOR (PRHG10)
41	PLATE, BAFFIE RIGHT (PRG8/10)
42	PLATE, BAFFIE LEFT (PRG8/10)
43	PLATE, BAFFIE RIGHT (PRG8/10)
44	PLATE, BAFFIE LEFT (PRHG8)
45	FILTER RAIL, BOTTOM
46	ASSY. FAN FRAME
47	ASSY. MOTOR BASE
48	SUPPORT BASE
49	MOTOR, 1.1 kW 50Hz HITACHI
50	MOTOR, 1.5 kW 50Hz HITACHI
51	FAN BASE
52	ASSY. BLOWER HOUSING A
53	ASSY. BLOWER HOUSING B
54	FAN SIROCCO, D286 x L274 PLASTIC
55	FAN SIROCCO, D286 x L184
56	SHAFT, FAN
57	SHEET, RUBBER 38 x 165mm
58	BEARING, ID20 x OD47 x t27
59	RUBBER, MOUNT B26 D121
60	BEAM, ASSY.
61	CASE
62	PULLEY, B1 x 4 x 24mm NBK

NO	DESCRIPTION
63	PULLEY, B1 x 4.5 x 24mm NBK
64	PULLEY, BLOWER B1 x 6 x 20mm
65	BELT, V B30 BANDO
66	BELT, V B31 BANDO
67	SUPPORT, PARTITION
68	ASSY. PANEL REAR TOP
69	ASSY. ORIFICE (BELL MOUNT)
70	ASSY. MOTOR BRACKET
71	MOTOR, 0.55kW HITACHI
72	FAN, PROPELLER 26” TORIN
73	FAN, GUARD SQUARE
74	ASSY, C/HEATER 62W, 240V, 50Hz
75	ASSY. C/HEATER 72W, 240V, 50 Hz
76	ASSY. CONTROL BOX (PRG8)
77	ASSY. CONTROL BOX (PRHG8)
78	ASSY. CONTROL BOX (PRG10)
79	ASSY. CONTROL BOX (PRHG10)
80	COVER
81	COVER, TERMINAL FRONT
82	TOP PLATE (INDOOR)
83	AIR FILTER, 1020mm x 615mm
84	PANEL, SIDE LEFT
85	PANEL, SIDE LEFT
86	PANEL, SIDE RIGHT
87	COVER, FIRLTER RIGHT
88	ASSY. INTAKE DUCT
89	ASSY. DISCHARGE DUCT
90	PANEL, SERVICE
91	PANEL, SERVICE
92	HANDLE
93	BRACKET, FITTING

Model : MRT120A

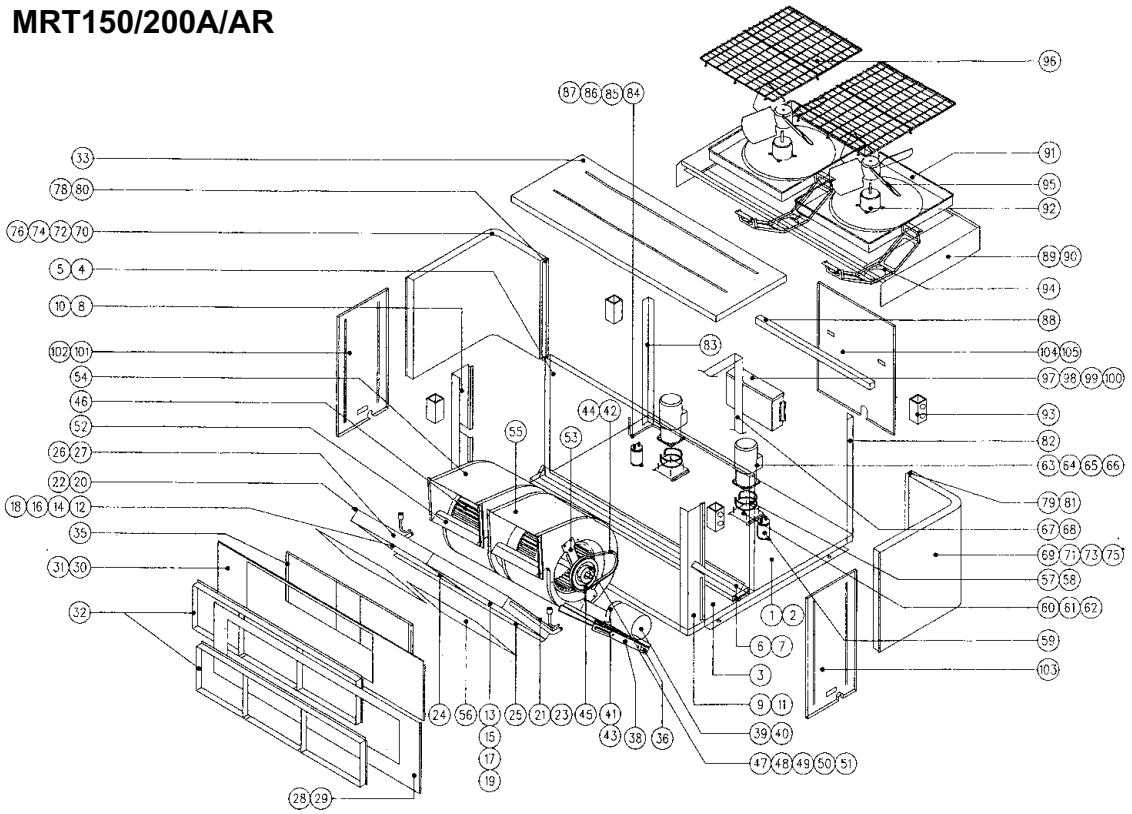


NO	DESCRIPTION
1	ASSY. BASE INDDOOR
2	ASSY. BASE OUTDOOR
3	STRUCTURE BASE RIGHT
4	STRUCTURE BASE LEFT
5	ASSY. PARTITION
6	ASSY. SUPPLY AIR
7	ASSY. DRAIN PAN
8	COVER, LOW IN HALE
9	ASSY. COMPRESSOR BASE
10	COMPRESSOR, ASSY ZR144KC-TFC-501
11	COMPRESSOR, ASSY ZR144KCE-TFD-501
12	ASSY. OUTDOOR COIL
13	PLATE, BAFFIE
14	ASSY. PILLAR OUTDOOR 1 (PRHG8/10)
15	ASSY. PILLAR OUTDOOR 2
16	ASSY. TUBING (RT120A)
17	ASSY. COVER BLOWER
18	ASSY. PILLAR INDOOR 1
19	ASSY. PILLAR INDOOR 2
20	ASSY. FRONT PANEL
21	ASSY. BEAM FRONT
22	ASSY. COIL INDOOR
23	PLATE, BAFFIE RIGHT (PRHG8/10)
24	PLATE, BAFFIE LEFT (PRHG8/10)
25	FILTER RAIL, BOTTOM
26	ASSY. FAN FRAME
27	ASSY. MOTOR BASE
28	SUPPORT, MOTOR BASE
29	MOTOR, 1.5kW 50Hz HITACHI
30	FAN BASE

NO	DESCRIPTION
31	ASSY. BLOWER HOUSING A
32	ASSY. BLOWER HOUSING B
33	FAN SIROCCO, D286 x L274 PLASTIC
34	FAN SIROCCO, D286 x L184
35	SHAFT, FAN
36	SHEET, RUBBER 38 x 165mm
37	BEARING, ID20 x OD47 x t27
38	RUBBER, MOUNT B26 D121
39	BEAM, ASSY.
40	CASE
41	PULLEY, B1 x 4.5 x 24mm NBK
42	PULLEY, BLOWER B1 x 5.5 x 20mm//70mm
43	BELT, V B30 BANDO
44	SUPPORT, PARTITION
45	PARTITION, OD
46	ASSY. PANEL REAR TOP
47	ASSY. ORIFICE 30”
48	ASSY. MOTOR BRACKET
49	MOTOR, HAT081 HEADLINE
50	FAN, PROPELLER 30” TORIN
51	FAN, GUARD SQUARE
52	HEATER, CRANKCASE (018-0047-01)
53	ASSY. CONTROL BOX
54	COVER, OD PARTITION
55	COVER, BOX
56	TOP PLATE (INDOOR)
57	AIR FILTER, 1020mm x 615mm
58	PANEL, SIDE LEFT
59	PANEL, SIDE RIGHT
60	COVER, FILTER RIGHT

NO	DESCRIPTION
61	ASSY. INTAKE DUCT
62	ASSY. DISCHARGE DUCT
63	PANEL, SERVICE 1
64	PANEL, SERVICE 2
65	HANDLE
66	BRACKET, FITTING

Model: MRT150/200A/AR

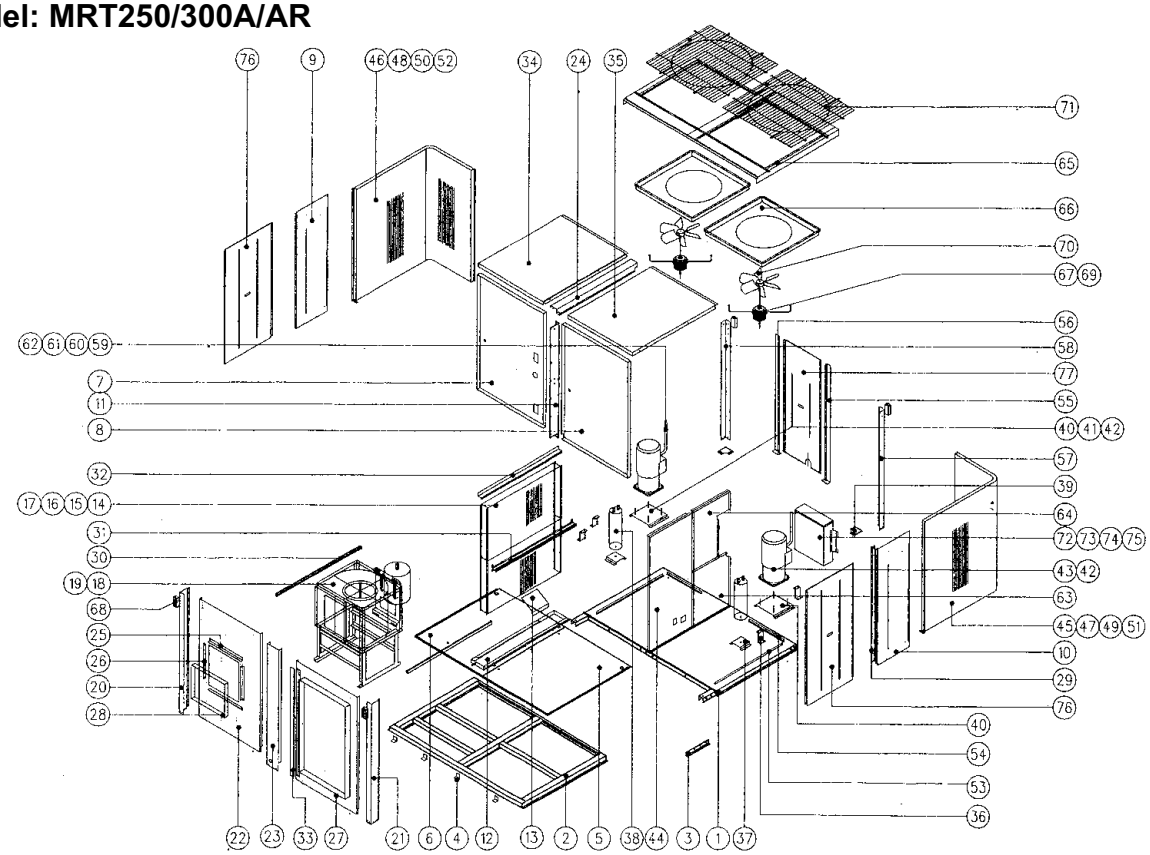


NO	DESCRIPTION
1	ASSY. BASE OAN OD
2	ASSY. BASE FRAME REAR
3	ASSY. BASE PAN ID (INS)
4	ASSY. SEPARATOR (INS)
5	ASSY. SEPARATOR (INS)
6	ASSY. DRAIN PAN (INS)
7	ASSY. DRAIN PAN (INS)
8	ASSY. FRONT PILLAR L (INS)
9	ASSY. FRONT PILLAR R (INS)
10	ASSY. FRONT PILLAR L (INS)
11	ASSY. FRONT PILLAR R (INS)
12	ASSY. COIL INDOOR RT150A L
13	ASSY. COIL INDOOR RT150A R
14	ASSY. COIL INDOOR RT200A L
15	ASSY. COIL INDOOR RT200A R
16	ASSY. COIL INDOOR RT150 AR L
17	ASSY. COIL INDOOR RT150AR R
18	ASSY. COIL INDOOR RT200AR L
19	ASSY. COIL INDOOR RT200AR R
20	ASSY. BAFFIE PLATE L (INS)
21	ASSY. BAFFIE PLATE R (INS)
22	ASSY. BAFFIE PLATE L (INS)
23	ASSY. BAFFIE PLATE R (INS)
24	PLATE, BAFFIE C
25	ASSY. ATTACHMENT SEPARATOR (INS)
26	ASSY. BEAM INS
27	ASSY. BEAM INS
28	ASSY. FRONT PANEL LOW (INS)
29	ASSY. FRONT PANEL LOW (INS)
30	ASSY. FRONT PANEL UPPER (INS)
31	ASSY. FRONT PANEL UPPER (INS)
32	ASSY. DUCT FLANGE
33	ASSY. TOP PANEL (INS)
34	ASSY. BLOWER COVER (INS)
35	ASSY. FAN BASE FLANGE

NO	DESCRIPTION
36	ASSY.FRAME MOTOR
37	ASSY. MOTOR BASE
38	WASHER, MOTOR BASE
39	MOTOR, 2.2kW 50Hz R P714568X01 HITACHI
40	MOTOR3.7kW 50Hz R P714569X01 HITACHI
41	PULLEY, B2x5 28mm
42	BELT V B42 BANDO
43	PULLEY, B2 x 6 x 28mm NBK
44	BELT, V B34 BANDO
45	PULLEY, BLOWER B2x10x28mm
46	BLOWER WHEEL, D384.4x374 PLSTC W12160G04
47	SHAFT, FAN PW/PA20 1365MML VR310G419H05
48	SHAFT, KEY 7x7x50 S59611H09 P15,20
49	BEARING, T28Xid30Xod62 b58d071h04
50	RUBBER, MOUNT T21xID45xOD74Xb3h226h01
51	BEARING CASE, T10.5Xid33Xod108XB02r192h0
52	CUT OFF, L479mm R02C755H05
53	ASSY. BEAM x W793249G01
54	ASSY. BLOWER HOUSING LEFT PRG15,20MYA
55	ASSY. BLOWER HOUSING RIGHT PRG15,20MYA
56	AIR, FILTER SARANET 667x840mm PRG15,20
57	ASSY. C/HEATER 62W,240V,50Hz W883219G01
58	ASSY. C/HEATER 72W,240V,50Hz W883219G03
59	ACCUMULATOR, P734972x02 TC399637-1MIT
60	ASSY. COMP. BASE
61	ASSY. COMP. SUPPORT
62	ASSY. COMP. SUPPORT
63	COMPRESSOR, ASSY. ZR94KC-*TFD-501 W/O C.H
64	COMPRESSOR, ASSY. ZR125KC-TFD-501 W/O C.H
65	COMPRESSOR, JH521YEB MITSUBISHI
66	COMPRESSOR, JH527YEB MITBISUBHI
67	ASSY. TOP PANEL BEAM
68	ASSY. SEPARATOR OUTSIDE
69	ASSY. COIL OUTDOOR L RT150A
70	ASSY. COIL OUTDOOR R RT150A

NO	DESCRIPTION
71	ASSY. COIL OUTDOOR L RT200A
72	ASSY. COIL OUTDOOR R RT200A
73	ASSY. COIL OUTDOOR L RT150AR
74	ASSY. COIL OUTDOOR R RT150AR
75	ASSY. COIL OUTDOOR L RT200AR
76	ASSY. COIL OUTDOOR R RT200AR
77	ASSY. SUPPLY AIR (INS)
78	ASSY. PILLAR R COND. PRG 15,20XW876857G03
79	ASSY. PILLAR R COND. PRG 15,20Xw876857G04
80	ASSY. PILLAR LEFT COND. PRHG 15,20MYA
81	ASSY. PILLAR RIGHT COND. PRHG 15,20MYA
82	ASSY. PILLAR OUTDOOR L (INS)
83	ASSY. PILLAR OUTDOOR R (INS)
84	ASSY. TUBING RT150A
85	ASSY. TUBING RT200A
86	ASSY. TUBING RT150AR
87	ASSY. TUBING RT200AR
88	ASSY. PABEL BEAM REAR TOP
89	ASSY. REAR TOP PANEL
90	ASSY. REAR TOP PANEL
91	ASSY. ORIFICE (BELL MOUNT) PR(H)G-COM
92	MOTOR, 0.55kW P714697x02 HITACHI
93	BRACKET, FITTING PRG-COM
94	ASSY. MOTOR BRACKET
95	FAN PROPELLER, 26” TORIN (NEW)
96	GUARD, FAN
97	ASSY. CONTROLLER RT150A
98	ASSY. CONTROLLER RT200A
99	ASSY. CONTROLLER RT150AR
100	ASSY. CONTROLLER RT200AR
101	ASSY. SERVICE PANEL L (INS)
102	ASSY. SERVICE PANEL L (INS)
103	ASSY. SIDE PANEL R (INS)
104	ASSY. SERVICE PANEL REAR (INS)
105	ASSY. SERVICE PANEL REAR (INS)

Model: MRT250/300A/AR



NO	DESCRIPTION
1	ASSY. BASE FRAME REAR
2	ASSY. BASE FRAME FRONT
3	PLATE, BASE
4	FIXTURE
5	ASSY. RIGHT BASE PANEL (INS)
6	ASSY. LEFT BASE PANEL (INS)
7	ASSY. PARTITION L (INS)
8	ASSY. PARTITION R (INS)
9	ASSY. SIDE PILLAR L (INS)
10	ASSY. SIDE PILLAR R
11	ASSY. COIL SUPPORT (INS)
12	ASSY. DRAIN PAN (INS)
13	PAN DRIP
14	ASSY. COIL INDOOR RT250A
15	ASSY. COIL INDOOR RT300A
16	ASSY. COIL INDOOR RT250AR
17	ASSY. COIL INDOOR RT300AR
18	ASSY. BLOWER SECTION RT250
19	ASSY. BLOWER SECTION RT300
20	ASSY. FRONT PILLAR L (INS)
21	ASSY. FRONT PILLAR R (INS)
22	ASSY. FRONT PANEL L (INS)
23	ASSY. CENTER PILLAR (INS)
24	ASSY. TOP PANEL SUPPORT (INS)
25	HOLDER, BLOWER 1
26	HOLDER, BLOWER 2
27	ASSY. FRONT PANEL R (INS)
28	ASSY. DISCHARGE DUCT FLANGE
29	HOLDER, SIDE PANEL
30	BEAM, PANEL HOLDER

NO	DESCRIPTION
31	ASSY. FILTER RAIL CENTER
32	RAIL FILTER 2
33	ASSY. FILTER COVER (INS)
34	ASSY. PANEL FRONT TOP L (INS)
35	ASSY. PANEL FRONT TOP R (INS)
36	SUPPORT, TUBE
37	SUPPORT, ACCUMULATOR
38	ACCUMULATOR, A-AS62011 ALCO
39	SUPPORT, COIL BASE
40	ASSY. COMP SUPPORT RT250
41	ASSY. COMP SUPPORT RT300
42	COMP, ASSY. ZR19M3-TWD-522
43	COMP, ASSY. ZR144KC-TFD-501
44	ASSY. SEPARATOR 1
45	ASSY. COIL OUTDOOR L RT250A
46	ASSY. COIL OUTDOOR R RT250A
47	ASSY. COIL OUTDOOR L RT300A
48	ASSY. COIL OUTDOOR R RT300A
49	ASSY. COIL OUTDOOR L RT250AR
50	ASSY. COIL OUTDOOR R RT250AR
51	ASSY. COIL OUTDOOR L RT300AR
52	ASSY. COIL OUTDOOR R RT300AR
53	PLATE, BOTTOM 1
54	PLATE, BOTTOM 2
55	ASSY. PILLAR REAR CENTER L
56	ASSY. PILLAR REAR CENTER R
57	ASSY. PILLAR OUTDOOR L
58	ASSY. PILLAR OUTDOOR R
59	ASSY. TUBING RT250A
60	ASSY. TUBING RT300A

NO	DESCRIPTION
61	ASSY. TUBING RT250AR
62	ASSY. TUBING RT300AR
63	PANEL, SEPARATOR 3
64	ASSY. SEPARATOR 2
65	ASSY. REAR TOP PANEL
66	ORIFICE, 32”
67	MOTOR, AEFPAL 6P-1 1HP, TECO
68	BRACKET, FITTING PRG-COM
69	BRACKET, FAN MOTOR 32”
70	FAN PROPELLER, 32” TORIN
71	GUARD, FAN RT250/300
72	ASSY. CONTROLLER RT250A
73	ASSY. CONTROLLER RT300A
74	ASSY. CONTROLLER RT250AR
75	ASSY. CONTROLLER RT300AR
76	ASSY. SIDE PANEL (INS)
77	PANEL, SERVICE

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